A STUDY ON

DIAGNOSTIC METHODOLOGY

OF

MANTHARA KASAM

IN THE CONTEXT OF ENNVAGAI THERVUGAL

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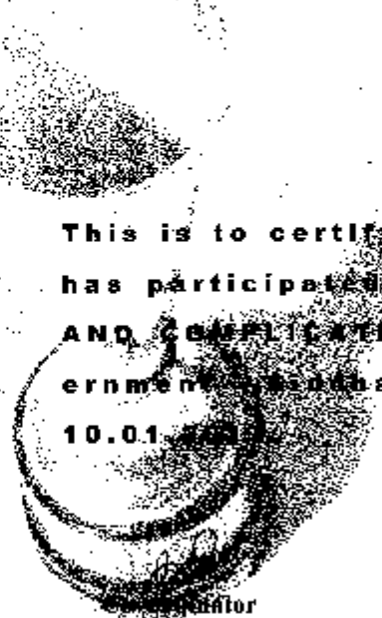

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CONTENTS

Introduction

Siddha system is one of the oldest systems of medicine in India. It was propounded by lord Siva as a scientific and spiritual benevolence to his disciples. The system was woven into a discipline of reputation by symphoms of eighteen siddhars.

Siddha literature is in tamil and it is practised largely in tamil speaking part of India and abroad. The siddha system is largely therapeutic in nature.

The siddha system of medicine is a practice of Arts and Science, the citadel of medical systems. The term siddha means achievements and Siddhars were saintly persons who achieved results in medicine. Eighteen Siddhars were said to have contributed towards the development of this medical system. Again, this had resulted in alchemy meant for the preparation of long acting, potent, high – tech medicines for the treatment of incurable diseases.

A few others practiced exclusively herbal components as a source of nutrition, Medicine and food, thus testifying a plant with medical property as herb.

Further, for the management of a few clinical conditions a long acting potent minerals were also transformed into medicine.

In brief, Siddha envizages the use of herbs, minerals, metals and as a matter of fact any organic material available in universe.

Manthara Kasam may be correlated with bronchial asthma. According to Siddha literatures Manthara Kasam is curable.

The disease Manthara kasam is widely prevalent among human population, so the author bound to reveal the causative factors, Pathology and identifying the diagnostic methodology through siddha system.

SIDDHA PHYSIOLOGY

The physiology in siddha system includes 96 basic elements, Seven somatic compounds, fourteen Reflexial functions, Six tastes, four body fires and three immunities.

Udal thathuvam (physiology) of siddha aspect composed of

Thathuvas	-	96 basic elements
Udal kattukal	-	7 Somatic compounds
Vegams	-	14 reflexial functions
Suvaigal	-	6 tastes
Udal thee	-	4 body fires
Udal Vanmai	-	3 immunities

96 Basic elements

1.Bootham	-	5
2.Pori	-	5
3.Pulan	-	5
4.Kanmendhiriyam	-	5
5.Gnanendhiriyam	-	5
6.Karanam	-	4
7.Arivu	-	1
8.Naadi	-	10
9.Vayu	-	10
10.Asayam	-	5
11.Kosam	-	5
12.Aatharam	-	6
13.Mandalam	-	6
14.Malam	-	3
15.Thodam	-	3
16.Edanai	-	3
17.Gunam	-	3

18.Vinai	-	2
19.Raagam	-	8
20.Avaththai	-	5
		96

UYIR THATUKKAL

Vatham

Pitham

Kabam

Vatham :-

Vatham is the kinetic energy that effect all movements

Location :-

Vatham is located in Abanan, Idakalai, Hip region, Bone, muscles, Nerves, Joints, Spermatic Cord, Skin, Hair follicles, Stools etc.,

Types of Vatham :-

1. Pranan : This controls knowledge mind and five objects of sense which are helpful for breathing and digestion.
2. Abanan : This is responsible for all downward movements such as Passing of urine, Stools, Sperms, menstrual flow, ova, foetus etc.
3. Viyanan : This responsible for movements of all parts of body.
4. Uthanan : This is responsible for all upward visceral movements such as vomiting, eructation and nausea.
5. Samanan : This is the neutralizing force for the above four vayus, this aid for proper digestion.

6. Naagan : Responsible for opening and closing a eyes and also responsible for yawning and vision.
7. Koorman : Responsible for vision yawning and also responsible for higher intellectual function.
8. Kirukaran : Responsible for Salivation, nasal secretion and appetite.
9. Thevathathan : Responsible for laziness, Sleeping and anger.
10. Dhananjeyan: : Responsible for swelling of body after death, it escape on the third day after death by bursting of cranium.

Pitham:

Regulates thermogenesis (or) heat production, metabolism, digestion, Colouration of blood, excretion and Secretion.

Types of Pitham :

1.Anarpitham:	:	It gives appetite and helps digestion
2.Prasagam	:	It gives complexion to skin
3.Ranjagam	:	It is responsible for the colour and content of blood
4.Alosagam	:	It brightens the eyes.
5.Sathagam	:	It controls the whole body. It has the property of fullfillment.

Kabam :

Kabam Stabilizes, maintains and lubricate all movements.

Types of Kabam :

1. Avalambagam : Present in lungs, It controls the functions of lungs, heart and other kabas.
2. Kilethagam : Lives in stomach, it gives moisture.
3. Pothagam : Tongue is the centre of Pothagam and responsible for identifying taste.
4. Tharpagam : Present in the head and responsible for coolness of the both eyes.
5. Santhigam : Responsible for the lubrication and free movements of the Joints which are situated in Joint

UDAL THADUKKAL

1. Saaram - It is responsible for the growth and development. It keeps the individual in good spirit and it nourishes the blood
2. Seneer - Blood imparts colour to the body and nourishes the muscles responsible for the ability intellect of the individual.
3. Oon - It gives shape of the body according to the requirements for the Physical activity.
4. Kozhuppu - It helps in lubricating the different organs and maintains oily matter of the body.
5. Enbu - Support the skeletal system and responsible for the posture and movements of the body.
6. Moolai - It fills the bone cavity, imparts strength and endurance.
7. Sukkilam (or) Suronitham - It is responsible for the reproduction

VEGAMS

In Human body, the normal physiology includes 14 urges. They are called vegangal

1.	Abanavayu	-	flatus
2.	Thummal	-	Sneezing
3.	Siruneer	-	urine
4.	Malam	-	Stool
5.	Kotavi	-	Yawning
6.	Pasi	-	Hunger
7.	Neer Vetkai	-	Thirst
8.	Kaasam	-	Erumal
9.	Elaippu	-	Fatigue / rest
10.	Nithirai	-	Sleep
11.	Vaanthi	-	Vomit
12.	Kanneer	-	Tear
13.	Sukkilam or Suronitham	-	sperm or ovum
14.	Suvaasam	-	Respiration

SUVAIGAL

1.Innippu	-	Sweet
2.Pulippu	-	Sour
3.Uppu	-	Salty
4.Kaippu	-	Bitter
5.Karppu	-	Pungent
6.Thuvarppu	-	Astrigent

UDAL THEE

That is body fire, It helps in digestion

1.Samakini	-	To maintain the normal complete digestion
2.Mandhakini	-	Delayed digestion
3.Deekshanakini	-	Quick fast digestion in an earlier period
4.Vishamakini	-	Incomplete digestion leading to toxicity.

UDAL VANMAI

It means strength and vitality of the body.

1)Eyarkai vanmai	-	Inherited immunity
2)Kala vanmai	-	Age, Season and time
3)Cheyarkai vanmai	-	Improvements of 3 vitality obtained by diet, day today habits and physical exercise.

SIDDHA PATHOLOGY

Siddha Pathology deals mainly on the three humours (Mukkutram) theory. The vitiated humours bring the disease in the human body which is the microcosm. The 96 fundamental principles (Thathuvams) frame the structure of Siddha Pathology which explores the causes, Symptoms, natural Phenomenon of bodily mechanisms and etc.

In Siddha system it is defined that,

"நோய்நாடி நோய்முதல் னாடி யதுதணிக்கும்
வாய்நாடி வாய்ப்பச் செயல்"

- திருக்குறள்

Make a careful diagnosis, discover the true cause of disease, think out the proper remedy and apply it effectively.

Mukkutram

1.**Vatham**

Abnormal functions of vatham:-

Pain all over the body, piercing pain, inflammation and redness of complex, roughness of the skin, hardness of the limbs, astringent taste in the mouth, tastelessness, sweating, sleep, contraction and numbness or Paralysis of the limb, tremors, Muscular wasting, drecreased excretion of stools and urine, thirst, blackish discolouration of skin, stool and urine.

In increased condition :-

- Distended abdomen
- Constipation
- Weakness
- Insomnia
- tremors
- Breathlessness
- Blackish discolouration of skin

In decreased condition:-

- Body pain
- Feeble voice
- Syncope
- Diminished capabality at brain

II. Pitham:-

Abnormal functions of Pitham:-

Indigestion, acidity, burning sensation in the heart, throat and Stomach

In increased condition:-

- Yellowish discolouration of eyes, skin, urine and motion.
- Polyphagia
- Burning sensation all over the body
- Sleeplessness

In Decreased condition:-

- Cold
- Pallor
- Decreased appetite
- Symptoms associated with growth of Kabam.

Kabam:-

Abnormal functions of Kabam:-

Whiteness of complexion, cold, itching, dullness, heaviness, oilyness, loss of sensation, a sense of sweetness in the mouth.

In increased condition:-

- Loss of appetite
- Excessive Salivation
- Heaviness

- Dyspnoea
- Excessive sleeping
- Whiteness of complexion
- Diminished activity.

In Decreased condition:-

- Prominence of bony edges
- Dry cough
- Lightness
- Profuse sweating
- Palpitation
- Giddiness
- Dryness of the joints

UDAL THADUKKAL

Saaram:-

Increased condition:- Leads to disease identical to the increase in Kaba like loss of appetite, excessive Salivation.

Decreased condition:- Loss at weight, tiredness, dryness of skin, laziness, diminished activity of the sense organs.

Seneer:-

Increased condition:- Boils and tumours in the different parts of the body, splenomegaly, colic pain, increased blood pressure, reddish eye and skin, Jaundice, Leprosy, haematuria etc.

Decreased condition:- Tiredness, Lassitude and Pallor

Oon:-

Increased condition:- Tumours or extra growth around the neck, face, abdomen, thigh, genitalia, etc.

Decreased condition:- Muscle Wasting

Kozhuppu:-

Increased condition:- Identical to that of increased Oon associated with dyspnoea and loss of activity.

Decreased condition:- Pain

Enbu:-

Increased condition:- Strong bones and teeth

Decreased condition:- Weak bones, teeth, nails and hairs

Moolai:-

Increased condition:- Heaviness, Swollen eyes, Swollen Phalanges, Oliguria and non-healing ulcers.

Decreased condition:- Osteoporosis and Shunken eyes.

Sukkilam or Suronitham:-

Increased condition:- Increased sexual activity and signs identical to urinary calculi

Decreased condition:- Failure to reproductive. Pain in genitalia etc.

ENNVAGAI THERVUGAL

”நாடிப்பரிசம் நாநிறம் மொழிவிழி
மலம் மூத்திரமிவை மருத்துவராயுதம்”

”மெய்க்குறி நிறந்தொனி விழிநாவிருமலம் கைக்குறீ”

From these, the eight parts of diagnosing aspects are seen.

1. நா - Tongue
2. நிறம் - colour
3. விழி - Eye
4. மொழி - speech
5. ஸ்பரிசம் - skin
6. மலம் - Faecus
7. மூத்திரம் - urine
8. நாடி - pulse

Naa:

Vatha thegi	-	Black with fissures
Pitha thegi	-	Yellowish or red and inflammed
Kaba thegi	-	Pale with Salivation
Thontha thegi	-	Different coloured

Salivation, fissures, coating, thickness are noted

Niram:

Vatham	-	Black
Pitham	-	Yellow
Kabam	-	White
Thontham	-	Mixed colours

Vizhi:

Vatham	-	Black with watering nature
Pitham	-	Yellowish or Reddish
Kabam	-	Whitish with sticky discharge

The Secretion, brightness, size, ability, vision are also noted.

Mozhi:

Vatham	-	Normal pitched
Pitham	-	High pitched
Kabam	-	Low pitched
Thontham	-	Varied pitch

The articulation, Stammering, ability of speech, accent are also noted.

Sparism:

Vatha thegi	-	Warmth
Pitham thegi	-	Felt hot
Iya thegi	-	Cool
Thontham thegi	-	Features are according to kutram involved

The dryness, texture, Secretion, ulcers are noted.

Malam:

Vatham	-	Blackish with constipation
Pitham	-	Smaller amount, yellowish or re coloured
Kabam	-	Mucous mixed, whitish

The froth, consistency, amount and mixed contents are noted.

Moothiram:

Vatham	-	Clear white
Pitham	-	Yellow coloured
Kabam	-	Frothy

The special tests such as Neerkuri and Neikuri done in Moothiram

Naadi :

The naadi exhibits the changes in the internal environment and can be felt in ten main places.

”தாது முறைகேள் தனித் தகுதிச் சந்தோடு
ஓதுறு காமிய முந்தி நெடு மார்பு
காது நெடுமூக்குக் கண்டம் கரம்புருவம்
போதுறு முச்சி புகழ் பத்தும் பார்த்திடே”

- குதிச்சந்து
- காமியம்
- உந்தி
- மார்பு
- காது
- மூக்கு
- கண்டம்
- கரம்
- புருவம்
- உச்சி

Examine the radial pulse is easy because the artery lies superfical

Vatham	-	1 Mathirai
Pitham	-	½ Mathirai
Kabam	-	¼ Mathirai

The Vatham, Pitham and Kabam are felt with the fingers placing one inch below the thumb, with the hand in supine position.

Vatham	-	Index finger
Pitham	-	Middle finger
Kabam	-	Ring finger.

AIM AND OBJECTIVES

AIM :

To evaluate the disease Manthara Kasam through Ennvagi thervugal.

Objectives :

- To study the role of Ennvagi thervugal in the disease Manthara kasam.
- To study the effect of Manikadainool in the diagnosis of Manthara kasam.
- To collect the ancient Siddha Literatures about Manthara kasam.
- To evaluate the siddha basic physiology and Pathology.
- To study the clinical course of the disease Manthara Kasam with clean observation on the Aetiology, clinical features Pathology and diagnosis.
- To find out the changes that occurs in uyirthatukkal and udalkattukkal.

ELUCIDATION ABOUT MANTHARA KASAM

According to the literature yugi vaithya chindamani, manthara kasam has been mentioned as

”தானான துாயதோர் நாசி தன்னில்
சலநோய் நீர் தான்விழுந்து தும்ம லுண்டாம்
மானான மார்புநெஞ் சடைத்து மூச்சு
வலுவாகப் பாம்புபோல் சிறலாகும்
கானான கண்டமொடு முகமுங் காதும்
காயமதுங் கசிவாகி வியர்வை யாகும்
ஏனான இருமலொடு கோழை கம்மல்
இரைப்பாகு மந்தாரக் காச மாமே”

-யூகி வைத்திய சிந்தாமணி
பாடல் எண் 693
பக்க எண் 225

Meaning of the words:-

1.	தானான	பொதுமையற்றுத் தன்கென உரியகுணம்
2.	துாயதோர்	சுத்தமானது - Clean
3.	நாசிதன்னில்	மூக்கு - Nose
4.	சலநோய்	ஐயநோய்
5.	நீர்தான்	தண்ணீர் - Water
6.	விழுந்து	வீழல் - flow
7.	தும்மலுண்டாம்	தும்முதல் - Sneezing
8.	மானான	ஆழகான - beauty
9.	மூச்சு	சுவாசம் - breath
10.	வலுவாகப்	பலம் - Strength
11.	பாம்புபோல சீறலாகும்	பாம்புக்குத் தொந்தரவு நேர்ந்தால் செய்யும் சப்தம் - the hissing sound of an angry Snake

12.	கண்டமொடு	கழுத்து - Neck
13.	முகமும்	தலையில் ஒரு பகுதி - Face
14.	காதும்	கேள்வி உறுப்பு - Ear
15.	காயமதும்	உடம்பு - Body
16.	கசிதல்	இறங்கல் - leakage
17.	வியர்வையாகும்	வேர்வை - Sweating
18.	இருமலோடு	Cough
19.	கோழை	கபம் - Phlegm
20.	கம்மல்	குரலடைப்பு
21.	இரைப்பாகு	சாதரமாணமாக மூச்சுவிட முடியாமல் மிக்க விரைவுடன் ஒலியிடல் - difficult breathing attended with wheezing
22.	மந்தாரக் காசம்	மந்தாரக் காலத்தில் காணும் ஓர் வகைக் காசநோய் - Climatic asthma.

The poem clearly depicts,

- ❖ Running nose
- ❖ Sneezing
- ❖ Tightness of the chest
- ❖ Breath sound like hissing of snake
- ❖ Sweating all over the body
- ❖ Cough without expectoration
- ❖ Dyspnoea

SIDDHA ASPECT

In yugi vaidhya chindamani under the ‘Kasam’ chapter ‘Manthara kasam’ is one type of kasam is explained. When I undergone literary survey, I have come accrossed so many siddha texts which has given many information about the ‘Manthara kasam’ disease, which are all given as follows.

1. Agasthiyar – 2000 says,

There are eight types. Those are

1. Vadha kasam
2. Pitha kasam
3. Kaba Manthara kasam
4. Pakka Manthara kasam
5. Manthara kasam
6. Sudhika kasam
7. Marundheedu kasam
8. Kasam

Manthara kasam :

”மந்தாரகாசமே வந்தால் வாங்கிடும் சுவாசம் மேலா
யித்தார மெய்ச்சுரம் காணுமே இளைத்திடு மிருமல்மெத்த
சந்தா யுடம்பு தலையுடம்பு தளரவலிக்கு மிளைப்புமாகும்
பந்தாயுடம்பு நெஞ்சமும் பத்தி வலிக்கும் பண்பிதே”

The characteristic features of the diseases are breathlessness, fever, frequent cough, emaciation, pain in the chest and face.

2.Danvanthiri vaidhyam says,

There are five types. Those are

1. Manthara kasam
2. Pakka Manthara kasam
3. Vega kasam
4. Sura kasam
5. Vega kasam

Manthara Kasam:

"தூயதோர் நாசிதன்னில் தும்மல்தான் மிகவுண்டாம்
நோயநீர் விழுந்து நெஞ்சு நொந்தடைத் தீளை வாங்கு
வாயு மந்தார காசத் தடவுது தானே யென்ன
மாயமா முனிவன் சொன்ன வளமையை யறிந்து கொள்ளே"

Running nose, tightness of chest, breathlessness and cough with expectoration

3.Sikitcha Rathna Dheepam says,

It also explained about the 12 types of kasam (ie including Manthara kasam) as in yugi vaidhya chindamani.

4.Anubava vaidhya Deva Ragasiyam says,

There are five types of kasam. Those are

1. Oorthuva swasam
2. Arpa suvasam
3. Vichinna swasam
4. Maha swasam
5. Manthara swasam or thamaraga swasam.

Manthara swasam or thamarage swasam:

மார்பிலும், இருபக்க விலாவிலும் நோயை உண்டாக்கி கண்டத்தில் குறுகுறு என்ற சத்தத்துடன் இருமல், சோருதல், பீனிசம். அருசி, தாகம் எனும் குறிகுணங்களை அதிகரித்து, சகிக்கக்கூடாத சுவாசத்தை உண்டாக்கும். இரைப்பினால் தேகமல்லாம் அதிர்ந்து குலுங்கல், கண்டத்தில் அடைத்த கோழை வெளிப்பட்டால் சிறிது சௌக்கியமாக காணல், பிரயாசத்துடன் சயனித்தல், பெருமூச்சு விடல், உட்கார்ந்தால் சிறிது சௌக்கியம், நெற்றியில் வியர்வை, அடிக்கடி வாயுலரல், தேகம் நடுக்கம், உஷ்ணதிரவத்தில் இச்சை முதலிய குறிகுணங்களைப் பெற்றிருக்கும். இது பஞ்சேந்திரயங்களின் மயக்கம் உண்டுபண்ணுவதால் தமரகசுவாசம் என்றும், மேலும் பனிக்காலம், குளிர்ந்த ஜலம், சீதள பதார்த்தம், கீழ்காற்று இவைகளால் சுவாசம் அதிகரிப்பதால் மந்தாரகாசம் என்றும் மந்தார சுவாசம் என்றும் அழைக்கப்படும். இந்நோய் தனித்து இருப்பின் சாத்தியம் என்றும், சுரம், மூர்ச்சை உண்டானால் அசாத்தியம் என்றும கூறுவர்.

5. Uyir kakkum siddha Maruthuvam @ Aasthma Rakshmirtham says,

There are three types of kasam. Those are

1. Manthara kasam
2. Nachu pitha kasam
3. Ratha kasam

Manthara kasam:

முகமும், காதும் ஊறும். நாசி கரகரத்து தும்மல் உண்டாகும். நீர் வடியும், நெஞ்சில் கபம் கட்டி இருமும், இளைக்கும். நெஞ்சு விலாவும் வலிக்கும். மந்தார காலங்களில் நோய் அதிகப்படும். பசிமந்தம் ஏற்படும். வயிறு பொருமும். உடல் அதைக்கும். கிறுகிறுக்கும்.

6. **Tamilaga siddha vaitheya Gurugulam says,**

It also explained about the twelve types of kasam (ie including manthara kasam) as in yugi vaidhya chindamani.

7. Raja Vaidhya Bodini Part I says

There are 12 types of kasam. Those are

1. Vadha kasam
2. Pitha kasam
3. Sethuma kasam
4. Vadha pitha kasam
5. Pitha sethuma kasam
6. Thontha kasam
7. Manthara kasam
8. Swsa kasam
9. Shaya kasam
10. Sudar kasam
11. Peenisa kasam
12. Naadha kasam

மந்தாரகாசம் பற்றிய குறிப்புகள் இந்நூலில் தரப்படவில்லை.

8. **T.V. Sambasivam pillai dictionary says,**

There are Twenty types of kasam. Those are

1. Swasa kasam
2. Manthara kasam
3. Ratha kasam
4. Neela kasam
5. silethuma kasam
6. Pitha kasam
7. Vadha kasam
8. Bala kasam

9. Virana kasam
10. Karppa kasam
11. Eelai kasam
12. Thontha kasam
13. Pakka kasam
14. Pakka manthara kasam
15. Sudar kasam
16. Peenisa kasam
17. Naadha kasam
18. Vali kasam
19. Adaippu kasam
20. Gunma kasam

Manthara Kasam:

முகம், காது ஊரலெடுத்து, முகம் கரகரத்து தும்மலுடன் நீர்வடிந்து நெஞ்சில் கபங்கட்டி மந்தார காலங்களில் நோய் அதிகரித்து, இருமல், இளைப்புண்டாகி நெஞ்சு விலாவில் வலி காணும் ஓர் சய ரோகம். இந்த குறிகுணங்கள் மேகம் மூட்டம் உள்ள காலத்தில் உண்டாகும்.

9. **Roga nirnaya saram says,**

Manthara Kasam:

வாயு சிலேத்துமத்துடன் சேர்ந்து நரம்புகளில் வியாபித்து கண்டத்தில் குறுகுறு சத்தம், சகிக்க கூடாத அதிசுவாசம், அதி இரைப்பு, அதிகோழை, பெருமூச்சு விடுதல்.

ANATOMY & PHYSIOLOGY OF RESPIRATORY SYSTEM

The respiratory system brings air in close relationship with the mixed venous blood enabling tissue respiration by uptake of oxygen into the circulation and elimination of carbon dioxide. The organs of the respiration are

- Nose
- Pharynx
- Larynx
- Trachea
- Two bronchi
- Bronchioles and small air passages
- Muscles of respiration – the inter costal muscles and the diaphragm

Nose and Nasal cavity

Nose is lined by ciliated columnar epithelium which contains mucus secreting goblet cells. The anterior nares or nostril are the openings from exterior into the nasal cavity. The posterior nares are the openings from nasal cavity into the pharynx.

The Nasal cavity is the first of the respiratory organs and consists of a large irregular cavity divided into two equal passages by a septum. The posterior bony part of the septum is formed by the perpendicular plate of ethmoid bone and the vomer. The roof is formed by cribriform plate of ethmoid, sphenoid, frontal and nasal bones. The floor is formed by the roof of mouth consists of soft palate and hard palate.

The para nasal sinuses are air filled cavities in certain of the skull bones, lined by mucous membrane and communicating with the nasal cavity. The main sinuses are maxillary sinuses, frontal, sphenoidal and ethmoidal sinuses.

Respiratory Functions of Nose

The function of the nose is to begin the process by which the air is warmed, moistened and filtered. The projecting choncha increases the surface area and cause turbulance, spreading inspired air over the whole of the nasal cavity. Warming is due to immense vascularity of the mucosa. Filtering and cleaning of air occurs on hairs at the anterior nares traps layer particles. Mucous protects the underlying epithelium from irritation and prevents drying. Humidification occurs as air travels over moist mucosa and becomes saturated with water vapour. Irritation of the nasal mucosa results in sneezing a reflex action that forcibly expects an irritant.

Pharynx

Pharynx is the passage extending from the base of skull to the level of 6^{th} cervical vertebra where it is continous with the oesophagus. 13 cm length, 35 cm width.

Pharynx is divided into three parts. Naso Pharynx, Oro Pharynx, Laryngo Pharynx.

Naso Pharynx is the nasal part of the pharynx is situated behind the nasal cavity and above the level of the soft palate. Oro pharynx extends from the level of the soft palate to the level of the upper border of the epiglottis. Laryngo pharynx extends from the upper border of the epiglottis to the lower border of the cricoid cartilage.

Functions

Passage of air and food, warming and humidifying of air, taste, hearing protection.

Larynx

The larynx is the voice box and serves as an air passages. Extends from the root of the tongue at the inlet of the larynx to the commencement of the trachea at the level of the 6^{th} cervical vertebra. 4.3 cm length.

Functions

Production of sound, speech occurs during expiration when the sound produced by the vocal cords in manipulated by the tongue, cheeks, lips.

Production of lower respiratory tract from the swallowed food from mouth. It is the passage for air between pharynx and trachea.

Humidifying, filtering and warming continue as the air travels through the larynx.

Trachea

Trachea is the wind pipe. It starts at the lower border of the cricoid cartilage and ends at the level of the upper border of the 5^{th} thoracic vertebra by dividing into two bronchi right and left. 11– 12 cm length.

Functions

Support and potency. The arrangement of the cartilage and elastic tissue events linking and obstruction of the airway on the head and the neck moves. The cartilage prevents collapse of the tube, when the internal pressure is less than intra thoracic pressure; get at the end of forced expiration.

Mucociliary escalator, this is synchronous movement of the cilia that wafts mucous with adherent particles upwards to the larynx.

Cough reflex

Nerve endings in the larynx, trachea and bronchi are sensitive to irritation that generates nerve impulse which is induced by the vagus nerve to the respiratory

centre in the brain stem. The reflex motor response is deep inspiration followed with closed glottis. So the intra pleural pressures rises.

Then glottis is suddenly opened with explosive out flow of air at a higher velocity. Irrritates may be rapelled out of the respiratory tract.

Bronchi and Smaller Air Passage

The two bronchi are formed when the trachea divides at the level of 5^{th} thorcic vertebra. The right bronchus is a wider, shorter tube than the left bronchus and it lies in a more vertical position. It is approximately 2.5 cm long. After entering the right lung at the hilum it divides into three branches. Each branch divides into numerous smaller branches.

The left bronchus is about 5 cm long and is narrower than the right. After entering the lungs at the hilum, it divides into two branches one for each lobe. Each lobe branch then sub divides into progressively smaller tubes with in the lung Substance.

Bronchi are composed of the same tissue the trachea. They are lined ciliated columnar epithelium. The bronchus progressively subdivides into bronchioles, terminal bronchioles, respiratory bronchioles, alveolar duct and finally alveoli.

Functions of air passage not involved in gas exchange

Control of air entry

The diameter of the respiratory passage may be altered by contraction and relaxation of the involuntary muscles of their walls, thus regulating the volume of air entering the lungs. These changes are controlled by the autonomic nerve supply. Parasympathetic stimulation causes constriction and sympathetic stimulation causes dilation. The following functions continue as in the upper airways.

- Warming and humidifying
- Support and potency
- Removal of particulate matter
- Cough reflex

Respiratory Bronchioles and Alveoli

Lobules are blind ends of the respiratory tract, distal to the terminal bronchus consist of respiratory bronchioles, alveolar duct and alveoli. The walls gradually thinner until muscle and connective tissue fade out leaving a single layer of simple squamous epithelial cells in the alveolar duct and alveoil. These distal respiratory passages are supported by a loose network of capillaries. The exchange of gases during respiration takes place across two membranes – alveolar and capillary membrane.

Interspersed between the squamous cells are other cells that secrete surfactant, a phospholipid, fluid which prevents the alveoil from drying out. In addition, surfactant reduces the surface tension and prevents alveolar walls collapsing during expiration.

Functions of respiratory bronchioles and alveoli

- External respiration
- Defence against microbes

Cells in connective tissue protect against infection and inhaled foreign particles not trapped by mucous. Lymphocytes and plasma cells produce antibodies in the presence of antigen and macrophages and poly morpho nuclear lymphocytes are phagocytic. These cells are most active in the distal air passages where ciliated epithelium has to be replaced by flattened cells.

Warming and humidifying continue as in the upper airways. Inhalation of dry or inadequately humidified air over a period of time causes initiation of the mucosa and facilitates the establishment of pathogenic microbes.

Lungs

Lungs are paired organs of respiration. They are situated one on each side of the mediastinum with the thoracic cavity. Each lung resembles a half cone. It has an apex, a base, medial surface and costal surface.

Right lung is broader than the left lung and weight 220oz and is divided in to three lobes, where as the left lung weight 200oz and is divided in to two lobes. The apex is rounded and rises into the roof of the neck about 25mm above the level of middle third of the clavicle. The base is concave and semilunar in shape and is closely associated with the thoracic surface of the diaphragm.

The costal surface in convex and in closely associated with the costal cartilages, the ribs and the inter costal muscles. The medial surface in concave and has roughly triangular shaped area called hilum at the level of 5^{th}, 6^{th}, 7^{th} thoracic vertebra. Structures that enter and leave at the hilum are 1 bronchus, 1 pulmonary artery, 2 pulmonary veins, 1 bronchial artery, 1 bronchial vein, lymph vessels, parasympathetic and sympathetic nerves. The area between the lungs is the mediastinum. It is occupied by heart, great vessels, trachea, right and left bronchi, oesophagus, lymph nodes, lymph vessels and nerves.

Pleura and Pleural Cavity

Each lung is covered by the pleural cavity. The pleura consist of a closed sac of serous membrane, which contain small amount of serous fluid. The visceral pleura is adherent to the lungs covering each lobe and posses into the fissures which separates them. The parietal pleura is adherent to the inside of the chest wall and the thoracic surface of a diaphragm and is continuous with the visceral pleura at the hilum.

BRONCHIAL ASTHMA

Bronchial Asthma is a disease of airways that is characterised by increased responsiveness of the tracheo bronchial tree to a variety of stimuli, resulting in widespread spasmodic narrowing of the air passages which may be relieved spontaneously or by therapy.

Asthma is an episodic disease manifested clinically by paroxysms of dyspnoea, cough, polyphonic wheeze. However, a severe and unremitting form of the disease termed status asthmaticus may prove fatal.

Prevalence

Asthma is common and prevalent world wide. It occurs at all ages but nearly 50% of cases develop before the age of 10 years. In adults, both sexes are affected equally, but in children there is 2:1 male – female ratio.

Aetiology

From the aetiological point of view, asthma is heterogenous disease. It is useful for epidemiological and clinical purposes to classify asthma by the principle stimuli. There are two types of asthma.

- Early onset asthma (atopic, allergic, extrinsic)
- Late onset asthma (Non-atopic, Idiosyncratic, Intrinsic)

Atopic Asthma

This is the most common type of asthma usually begins in childhood. The disease is triggered by environmental antigens, such as dust, pollens, animals dander, fungal spores and food. A positive family history of atopy is common and asthmatic attacks are often preceded by allergic rhinitis, utricaria or eczema. Serum IgE levels are usually elevated. A skin test with antigen results in an immediate wheal and flare reaction, classic examples of type I – IgE mediated hypersensitivity reaction.

Non – Atopic Asthma

This type of asthma develops later in adult life with negative personal (or) Family history of allergy, negative skin test and normal serum levels of lgE. Most of these patients develop typical symptom-complex after an upper respiratory tract infection by viruses (e.g. rhinovirus, para influenza virus). Associated nasal polyp and chronic bronchitis are commonly present. About 10% of patients become hypersensitive to drugs, most notably to small doses of aspirin.

Pathogenesis of Asthma

The common denominator underlying the asthmatic diathesis is a nonspecific hyper irritability of tracheo-bronchial tree. When airway reactivity is high, symptoms are more severe and persistent and the magnitude diurnal fluctuation in lung functions is greater. The patients tend to awaken at night or in the early morning with breathlessness.

In both normal and asthmatic patients, air reactivity rises following vital infections of the respiratory tract and exposure to oxidants such as ozone and nitrogen-di-oxide. Allergen can cause airway responsiveness to rise within minutes and remain elevated for weeks.

A number of causes have been postulated for the increased airway activity of asthma, but the basic mechanism remains unknown. The most popular hypothesis at present is that of airway inflammation. Increased numbers of mast cell, epithelial cells, neutrophils, eosinophils and lymphocytes have been found in the broncho alveolar lavage fluid of patients with asthma & have number of mediators.

The airway can be oedematous and infiltrated with eosinophils, neutrophils and lymphocytes with or without the smelling of the epithelial basement membrane. There may be glandular hypertrophy. The most obvious finding is a generalised increase in cellularity associated with an elevated capillary density.

Although, the translation of this histological observation into the disease is still incomplete, it is widely believed that the physiological and clinical features of asthma derived from interaction among the residence and infiltrating inflammatory cells in the airway and the surface epithelium. The cells that play more important role are mast cells, eosinophils, macrophages, neutrophils and lymphocytes. The mediators released are histamine, bradykinin, the leukotrienes C, D & E, platelet activating factor (PAF) and prostaglandins (PGs) E_2, F_{2a} and D_2 produce an intense, immediate inflammatory reaction involving broncho constriction, vascular congestion and oedema formation. In addition to their ability to evoke prolonged constriction of airway smooth muscles and mucosal edema, the leukotrienes may also account for some of other patho physiological features of asthma such as increased mucous production and impaired mucociliary transport.

Chemotactic factors elaborated bring eosinophil, platelets and polymorphic nuclear leukocytes to the site of reaction. These infiltrating cells and resident macrophages and airway epithelial cells themselves potentially are an additional source of mediators to enhance immediate and the cellular phase.

Like mast cells in the early reaction the eosinophils play an important role in the infiltrative components. The granular protein in thin cell major basic protein and the eosinophilic cationic protein are capable of destroying the airway epithelium, which then sloughed into the bronchial lumen in the form of creak bodies. Besides resulting in a loss of barrier and secretary function, such damage elicits the production of chemostatic cytokines leading to further inflammation. In theory it also can expose sensory nerve endings, thus irritating neurogenic inflammatory pathways. That in turn, converts a primary local event into a generalised reaction via a reflex mechanism.

T lymphocytes also appear to be important in the inflammatory response. These cells are present in increased number in asthmatic airways and produce cytokines that activate cell-mediated immunity as well as humoral (leE) immune response.

Further more, Th_1, Th_2 lymphocyte subtype have functions that may influence the asthmatic response. The Th_1 Cytokines interleukin (IL-2) and interferons (IFN)y, can promote the growth and differentiation of (3 cells and activation of macrophages respectively.

TH2 cytokine IL-4 and IL-5 stimulate (cell growth and immunoglobulin section and IL-5 promote eosinophilic proliferation, differentiation and the activation. It can also facilitate granule release from basophils.

The stimuli that interact with airway responsiveness and incite acute episodes of asthma can be grouped into nine major categories – allergenic, pharmacological, environmental, occupational, infections, and exercise – related and emotional stress, food and drink, smoking.

PATHOLOGY

In patient who died of acute asthma the most striking feature of lung at mesopry is their gross over distension and failure to collapse when the pleural cavities are opened. When the lung is cut, numerous geletinous plungs of exudates are present in most of bronchical branches down to the terminal bronchioles. Histological examination shows the hypertrophy of the bronchial smooth muscle, hyperplasia of mucosal, sub mucosal vessels, mucosal oedema denudation of the surface epithelium, pronounced thickening of the basement membrane and eosinophilic infiltration in the bronchial wall. In smaller proportions of asthmatics that die, the eosinophilic infiltration is replaced by neutrophils and mucous plugging is conspicuously absent.

PATHO PHYSIOLOGY

The patho physiological hallmark of asthma is a reduction is airway diameter brough about by contraction of smooth muscles, vascular changes, congestion, oedema of the bronchial wall and thick tenacious secretions. The net result is an increase in airway resistance, a decrease in forced expiratory volumes and flow rates, hyperinflation of the lungs and thorax, increased work of breathing

alternation in respiratory muscle function, changes in elastic recoil, abnormal distribution in both ventilation and pulmonary blood flow with mismatched ratios and alternations to the arterial gas concentrations. Thus, although asthma is considered to be primarily a disease of airways, virtually all aspects of pulmonary functions are compromised during acute attacks. In addition in very symptomatic patients the ECG frequently shows right ventricular hypertrophy and pulmonary hypertension. When a patient is present for therapy, his or her forced vital capacity tends to be < 50% of normal. The forced expiratory volume averages 30% of less of predicted, while maximum and minimum mid-expiratory flow rate are reduced to 20% or less of the expected value.

In acutely ill patient, RV frequently approaches 400% of the normal. While functional residual capacity doubles. The patient tends to report that the attack has ended clinically, when RV has fallen to 200% of its predicted value and FEV has reached 50% of the predicted level.

Hypoxia is a universal finding during acute exacerbations, but frank ventilatory failure is relatively uncommon, most asthmatics have hypoapnea and a respiratory alkalosis. In acutely ill patients the finding of a normal arterial CO_2 tends to be associated with quite severe levels of obstruction.

Cyanosis is a very late sign. Likewise, signs attributes to CO_2 retention, such as sweating, tachycardia, wide pulse pressure or to acidosis, such as hyperapnea or H+ excess in individual patient, because they are too frequently seen in anxious patients with more moderate disease.

Clinical features:

The symptoms of asthma consist of dyspnoea, cough, wheeze, chest tightness & breathlessness.

Prolonged espiration, tachypnoea, tachycardia and mid- systolic hypertension.

Less typically, a patient with asthma may complain of intermittent episode of nonproductive cough or excretional dyspnoea. Unlike other asthmatics, when the patients are examined during symptomatic period, they tend to have normal breathing, but may have wheeze after repeated forced expiration and or may have ventilatory impairments when tested in the laboratory. In the absence of these signs a broncho-provocation test may be required to make the diagnosis.

1. **Acute Severe Asthma (Status Asthmaticus)**

- It is a medical emergency. Patient is hypoxic and cyanosed due to severe bronchospasm.
- Severe dysponea, unproductive cough, patient adopts an upright position fixing the shoulder gridle to assist the accessory muscles of respiration.
- It is characterized by tachycardia (pulse rate>120) tachypnoea (respiratory rate > 30/ minute) sweating, pulsus paradoxus, altered level of consciousness and an inspiration, expiration ratio of 1:3 or 1:4
- The presence of a silent chest and bradycardia in such patients is an ominous sigh,

ACUTE SEVERE ASTHMA – GRADE:

Grade$_1$A - Able to carry out house work or job with moderate difficulty. Sleep occasionally disturbed.

Grade$_1$B - Only able to carry out house work or job with great difficulty. Sleep frequently disturbed.

Grade$_2$A - Continued to chair (or) bed, but also to get up with moderate difficulty .Sleep disturbed, with little or no relief from inhaler.

Grade$_2$B - Confined to chair or bed and only able to get up with great difficulty. Unable to sleep. Pulse over 120/min.

Grade 3 - Totally confined to chair or bed. No sleep. No relief from inhaler. Pulse over 120/min.

Grade 4 - Immobilized and completely exhausted.

2. Nocturnal Asthma

Nocturnal asthma is defined as an overnight fall of more than 20% in the FEVor PEFR. It may be the sole mainfestation of asthma. This is presumed to be due to

- Early morning fall in circulating adrenaline
- Overnight changes in vagal tone (increased vagal tone in early morning)
- Airway cooling at night.
- Circadian changes in plasma cortisol concentration (mid night to early morning fall in cortisol level).

3. Gastric Asthma

Worsening of asthma after meals or dyspnoea occuring only after meals is due to gastro-oesophageal reflex.

4. Cough Variant Asthma

Cough may be the dominant symptoms and the lack of wheeze (or) breathlessness.

DIFFERENTIAL DIAGNOSIS

Airway Foreign Body

Bronchiectasis

Bronchiolitis

Cardiac asthma

Chronic obstructive pulmonary disease

Foreign body aspiration

Heart Failure

Gasotresophageal reflux disease

Pulmonary Embolism

Pulmonary Tuberculosis

Tropical Eosinophilia

Sinusitis

Upper Respiratory Tract infection

Vocal cord Dysfunction.

INVESTIGATION

Blood:

TC, DC, ESR, Hb%

Motion:

Ova, cyst

Urine:

Alb, Sug, deposits.

Sputum:

culture and cellular study

Imaging:

The plain chest radiograph

computed Tomograpy (CT)

ventilation perfusion imaging

Pulmonary Angiography

Endoscopy examination:

Laryngoscopy

Bronchoscopy

Mediastinoscopy

Pleural Aspiration and Biopsy

Skin test.

Immunological and Serological:

Microbiological Investigation

Histo Pathological and Cytological examination

Lung function Test

Arterial Blood Gas Analysis.

Complications:

Mortality is uncommon in asthma but a severe attack may result in respiratory failure and death.

This is more in ‘Status asthmaticus’ other complications include frequent respiratory infection, pulmonary collapse due to obstruction by viscid secretions, pneumothorax, emphysema and cough fracture (fracture of ribs due to violent coughing), children with asthma may show retardation of growth, especially iftualed with corticosteriod on a long term basic. Long standing bronchial asthma, punctured with frequent expiratory infections may lead to emphysema and chronic corpulmonale.

Prognosis

The prognosis of the individual attack is good, expect in severe acute asthma, when there is occasionally a fatal outcome, especially if treatment is inadequate of delayed. Spontaneous remission is fairly common in episodic asthma, particularly in children, but rare in chronic asthma, which can lead to irreversible airflow obstruction. Seasonal fluctuation can occur in both types of asthma. Atomic subject with episodic asthma are usually worse in the summer. When they are more heavily exposed to antigens, while chronic asthmatics are usually worse in winter months, because of the increased frequency of viral infections.

Prevention

Avoidance of allergens

There are few instances, in which a single agent can be identified as the cause for attacks of asthma. These allergens include grass pollens, mites, animal dander, drugs, industrial chemicals such as isocyanates and certain articles of diet. The majority of patients are hypersensitive to a wide range of allergens and attempts to avoid all of them are impracticable.

DETAILED PATHOLOGICAL VIEW OF THE DISSERTATION TOPIC

In yugi vaidhya chindamani, mantha kasam is one of the types of kasa noi under the kasa Roga nithanam.

Types of Kasam :

"தானான காசமது பனிரண் டாகும்
தாக்கான மந்தார காசத் தோடு
பானான பக்கமந் தார காசம்
பாங்கான சுடர்காசம் வாத காசம்
பேனான பித்தமாங் காசத் தோடு
பேர்பெரிய சுவாசகா சத்தோ டொக்க
ஏனான இயற்றமாங் காசத் தோடு
இறைப்பான சேட்டுமகா சந்தா னாமே"

"ஆகின்ற பீனசத்தின் சுவாச காசம்
அழிவாத பித்தத்தின் காச மாகும்
போகின்ற பித்தசேட் டுமகா சந்தான்
புகழ்பெரிய தொந்தமாங் காசத் தோடு
தேகின்ற காசமது பனிரண்டாகும்
தெளிவாக இதினுடைய செயலை கேளாய்"

-யூகி வைத்திய சிந்தாமணி

The types are

1. Manthara kasam
2. Pakka manthara kasam
3. Sudar kasam
4. Vatha kasam
5. Pitha kasam
6. Swasa kasam

7. Ratha kasam
8. Kaba kasam
9. Peenisa kasam
10. Valiazhal kasam
11. Azhaliya kasam
12. Mukkutra kasam

Causes for Manthara kasam :

"வேகின்ற வதிகமாம் புகையினாலும்
மீறுகின்ற பாணத்தால் மிக்குந் தானே"

"பாணத்தால் பரமாக்கினி மிகுக்கை யாலும்
பாரமா மாமிசங்கள் புசிக்கை யாலும்
தாணத்தாள் சஞ்சாரந் தவிர்க்கை யாலும்
சரிப்படாப் பதார்த்தங்கள் புசித்த லாலும்
தீணத்தாற் பொசியா மலிருக்கை யாலும்
சேயிழையார் மேலின்பஞ் சிதைவ தாலும்
மாணத்தால் மாதுக்க மடைத லாலும்
மதத்தாலுஞ் சுவாசமது மருவுங் காணே".

"காணவே தேவதைக்குப் பிரித்த பண்டம்
களவாடித் தின்றாலுங் கணவன் நன்னைத்
தோணவே நித்தையைச் சொல்து தாலுஞ்
சுசியான பதார்த்தமெச்சில் பண்ணி னாலும்
வேணவே ஒருவர்செய்த நன்றி தன்னை
மிகமறந்து கொடுமைகடான் விளம்பு வோர்க்கும்
பேணவே சபைதனிலே சொன்ன பேச்சுப்
புரண்டோர்க்குங் காசமது பிறக்குந் தானே"

-யூகி வைத்திய சிந்தாமணி

The causes are

- Inhalation of smoking
- Excessive intake of cold water
- Increased body heat
- Excessive intake of non-vegetarian diet
- Intake of allergic food
- Lack of Exercise
- Taking improperly cooked food
- Starving on hunger
- Sorrow
- Excessive coitus
- Over weight
- Stealing foods which were prepared of god
- Cursing life parter
- Tasting other's foods
- Forgetting one's help
- Those who didn't keep his works

Other causes of Manthara kasam :

- Wandering in hot climate
- Intake of cold food stuffs
- Singing & speaking very loudly
- Inhalation of smoke, dust particles, soil, strong alkali, good fragrance, bad smell etc.
- Any obstruction in respiratory tract
- Entry of food particles into the respiratory tract during swallowing.

INTRODUCTION ABOUT KABAM

"கபத்தினையன்றிச் சுவாசகாசங் காணாது"

-தேரையர்

Kaba disease also denotes "Silathuma noi" Types of kabam produced diseases are 1483. They are occur due to cooling and poorva kanmam and it produce emaciation of the body.

Relation of bootham with uyir Thadukkal:

Vatham – Aakayam + Kaatru

Pitham – Thee

Kabam – Mann + Neer.

Mann and Neer combined to produce Kabam. If any one or two bootha increase, it produces diseases of kaba.

At the same time, increased intake of Inippu or Uppu, it also altered kabam & produce kaba diseases.

In our body place of kabam is neck to head. Kabam stabilizes, maintains & lubricates all movements.

Locations of Kabam:

- Kabam is located in
    - Samanan
    - Semen
    - Head
    - Tongue
    - Bone marrow
    - Blood
    - Bones
    - Nose
    - large intestine

- Chest
- Eyes
- Nerves
- Stomach
- Brain &
- Pancreas.

Characters of Kabam:

Kabam is responsible for

Stability

Smoothness

Lubrication

It fixes the joints

It gives ability to cope with hunger, thirst & heat etc.

Functions of kabam:

Itching, dullness, cold, heaviness, oilliness, loss of sensation

White complexion

Indigestion

Excess sleep

Sweetness in mouth

Whitish discolouration of skin, eyes, urine and motion.

Pathogenesis of manthara kasam

1.உணவாதி செயல்களின் மாற்றம்
(ஐயத்ததை மிகுதிபடுத்தும் உணவை உட்கொள்ளுதல்,குளிர்ந்த நீரை பருகுதல்)

உடலாதி செயல்களில் மாற்றம்
(குளிர்காற்றில் ஈடுபடுதல், பனியில் ஈடுபடுதல்)

↓

ஐயம் + வாதம் பாதிப்படைந்து

↓

நுரையீரலை பற்றுகிறது

(நுரையீரல் ஐயம் இருப்பிடம், வாதம் செயல் புரியும் இடம்)

↓

கேடைந்த ஐயம் தன்னளவில் மிகும்

← இதனால் வாயுவின் ஓட்டத்திற்கு தடை ஏற்படும்

↓

உட்சென்று வெளிவரும் வாயுவின் அளவை குறைக்கும்

↓

தடைபட்ட வாயு இருமல், தும்மலாக வெளிவருளு

ஐயம் - குளிர்ச்சி

வாதம்- குளிர்ச்சி

↓

மிகுந்த அளவு குளிர்ச்சி உண்டாக்கும்

↓

இதனால் உட்செல்லும் வாயுவும் உரைந்து கட்டிக் கொள்ளும் → ஐயம் + உரைந்த வாதத்தின் அழுத்தத்தினால் மார்பில் ஒருவித இறுக்கம் உண்டாகும்

↓

சுவாசம் உட்செல்ல இயலாமல் மேல் சுவாசம் காணும்

↓

மந்தார காசம் உண்டாகும்

2.உணவாதி செயல்களின் மாற்றம்

(ஐயத்தை மிகுதிபடுத்தும் உணவை உட்கொள்ளுதல்,

குளிர்ந்த நீரை பருகுதல்)

↓

சமாக்கினி பாதிப்பு

↓

அனற்பித்தம் பாதிப்பு

↓

சாரம் உருவாகுவதில் பாதிப்பு

↓

பரவுகால் முழுமையான சாரத்தை கொண்டு செல்ல இயலாமை

↓

நுரையிரலுக்கு சாரம் செல்வதில் பாதிப்பு

↓

பிராண சக்தி குறைவு

↓

மந்தார சகாசம் உண்டாகுறது.

Alterations in Mukkutra Nilaigal:

Vatham

Pranan:

- It is responsible for respiration.
- It affects the heart, mind and organs of sense.
- In Manthara kasam, Vayu is affected leading to difficulty in breathing.

Abanan:

- It helps in excretion of urine & motion.
- In manthara kasam, Some patients had constipation.

Viyanan:

- Its main function is distribution of Saaaram.
- In manthara kasam, this distribution is affected.

Saamanan:

- Samanan is the Vayu that controls other vayus and digestion.
- In manthara kasam,Vayu is affected leading to difficulty in daily activities.

Uthanan:

- Its main function is inspiration & Expiration.
- In Manthara kasam, this Vayu is affected due to difficulty in breathing, cough, sneezing & running nose.

Nagan:

- This Vayu maintains opening and closure of eye lids
- In manthara kasam, this vayu is not affected.

Koorman:

- This vayu is responsible for vision & yawning.
- In manthara kasam, this vayu is not affected.

Kirugaran:

- It causes salivation, running nose, sneeze, cough & maintains appetite.
- In manthara kasam, this vayu is affected leading to running nose & loss of appetite.

Devathathan:

- It is responsible for tiredness, anger & emotional expression.
- In manthara kasam, this vayu is affected leading to tiredness.

Dhananjeyan:

- It produces swelling of the body after death and escapes through the scalp after the third day of death.

Pitham

Anar pitham:

- This lives in the stomach and helps in digestion.
- In manthara kasam, this vayu is affected leading to loss of appetite.

Ranjaga pitham:

- This is residing in stomach and gives colour to the blood.

Sadhaga pitham:

- It resides in the heart and executes the day to day activities with the help of mind and brain.
- In manthara kasam, this vayu is affected leading to difficulty in daily activity.

Alosaga pitham:

- It resides in both eyes and is responsible for clear vision.
- In manthara kasam, this vayu is not affected.

Prasaga pitham:

- It resides in skin and gives complexion.
- In manthara kasam, this vayu is not affected.

Kabam

Avalambagam:

- It is residing in lungs and helps other four types of kaba to function and also helps in the function of heart.

Kilathegam:

- It is present in the stomach and gives moistures of food materials and also helps in digestion.
- In manthara kasam, some patients have loss of appetite.

Pothagam:

- Living in the tongue & responsible for taste sensation.
- In manthara kasam, this vayu is not affected.

Tharpagam:

- Living in the head and keep the eyes cooling.
- In the manthara kasam, the vayu is not affected.

Sandhigam:

- It resides in the joint and helps for free movements.
- In manthara kasam, this vayu is affected leading to difficulty in daily activities.

UDAL KATTUGAL:

Saram:

It is the energy part of end product of digestion.

It strengthens the body and mind. In manthara kasam, It is affected to indigestion & loss of appetite.

Seneer:

It is responsible for knowledge, strength, boldness and healthy complexion. This is deranged in some patients with weakness.

Oon:

It gives the structure of the body and is responsible for the movement of the body.

Enbu:

It gives the shape of the body and is responsible for motion of the body.

Kozhuppu:

When the organs are doing their work this gives lubrication and facilities their work.

Moolai:

It is present in the core of the bone which strengthens and maintains the normal condition of the bone.

Sukkilam/Suronitham:

It is responsible for reproduction.

When the seven udal kattugal increase or decrease from the normal level, the normal functioning from the body is affected.

MATERIALS AND METHODS

The clinical study on “Manthara Kasam” has been taken in the post graduate department of Noi Naadal.

The clinical study was done in 40 cases, of them 36 cases were included in the study under the supervision of faculties and head of the department of P.G. Noi Naadal department.

1.Evaluation of clinical parameters:-

1. The detailed history and clinical features of the patients were taken carefully
2. The clinical history
3. Detail history of present and past illness
4. Personal and family history
5. Diet habits
6. Exposure to cold weather

2.Clinical features for manthara kasam:

1. Running nose
2. Sneezing
3. Tightness of chest
4. Breath sound like “hissing of snake”
5. Sweating all over the body
6. cough without expectoration
7. Breathlessness

3.Study on siddha clinical diagnosis:-

Siddha diagnosis was also made by the following methods.

1. Poriyal arithal
2. Pulanal arithal
3. Vinathal
4. Changes in uyir thatukkal
5. Changes in udal kattugal
6. Noi utra kalam
7. Manikadainool
8. Ennvagai Thervugal.

4.Modern parameters:-

For futher detailed study about the disease the following investigations was done.

Blood :-

Total Count – WBC

Differential Count – WBC

Erythrocyte Sedimentation Rate

Haemoglobin

Blood sugar

Blood urea

Urine :-

Albumin

Sugar

Deposits.

Motion:-

Ova

Cyst

Other test :-

Chest X-ray

Pulmonary Function Test.

OBSERVATION AND RESULTS

Results were observed with respect to the following aspects.

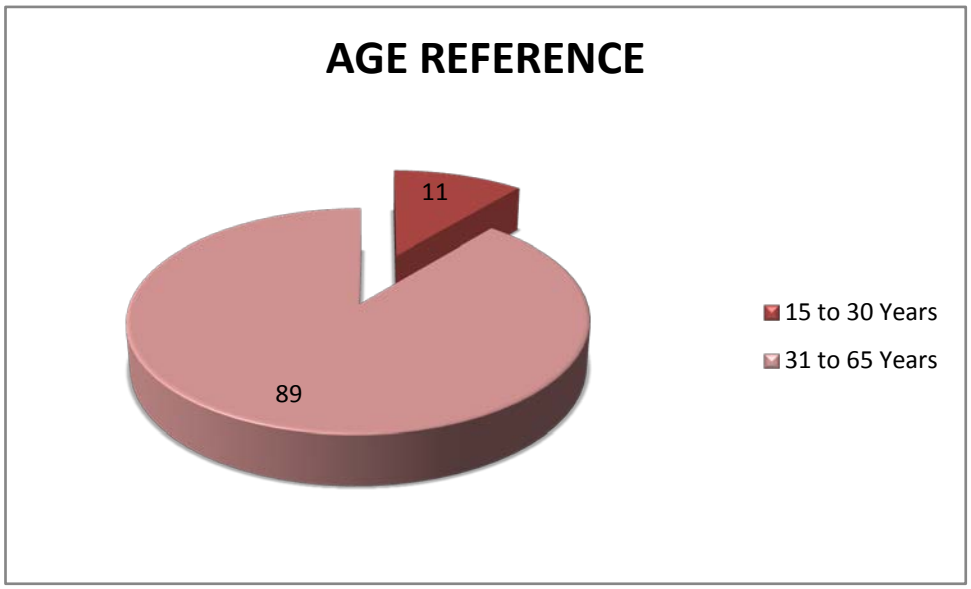
- Age reference
- Sex reference
- Socio-economic status
- Diet and personal habits
- Family history
- Nilam
- Sirupoludhu
- Kalam
- Clinical features
- Mukkutra nilai
- Udal kattugal
- Ennvagi Thervugal
- Manikadainool
- Laboratory Investigation
- Chest x-ray
- Pulmonary function test

AGE REFERENCE

Table :1

S.No	Age	No.of Cases	Percentage (%)
1.	15 to 30 Years	4	11
2.	31 to 65 Years	32	89

Out of 36 cases, 32 cases were affecting in the age groups between 31 to 65 years (89%), 4 cases were in the age group 15 to 30 years (11%).

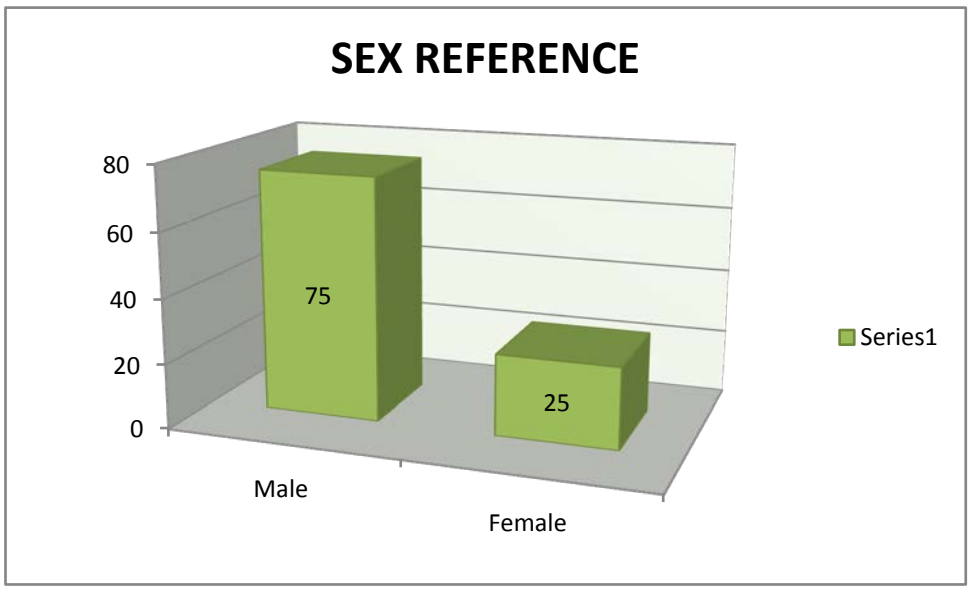


SEX REFERENCE

Table :2

S.No	Sex	No.of Cases	Percentage (%)
1.	Male	27	75
2.	Female	9	25

Out of 36 cases, males are more affected (75%) and females are affected less (25%).

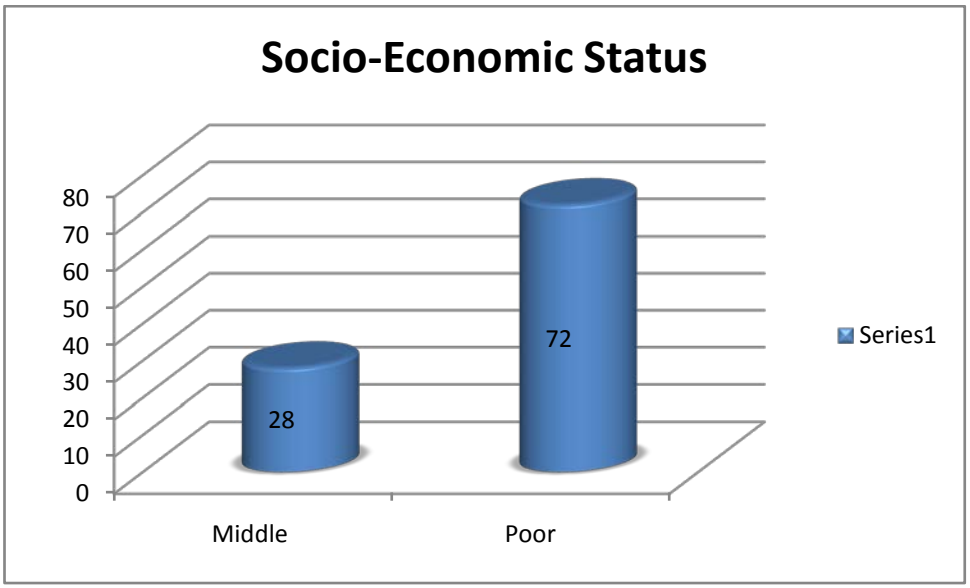


SOCIO-ECONOMIC STATUS

Table :3

S.No	Socio Economic Status	No.of Cases	Percentage (%)
1.	Middle	10	28
2.	Poor	26	72

Out of 36 cases, The disease more common in poor socio-economic status (72%) and middle (28%).



DIET AND PERSONAL HABITS

Table :4

S.No	Diet & Habit	No.of Cases	Percentage (%)
1.	Diet		
	1. Vegetarian	6	17
	2. Non- vegetarian	30	83
2.	Habit		
	1. Smoking	6	17
	2. Snuff	0	0
	3. Alcohol	4	11

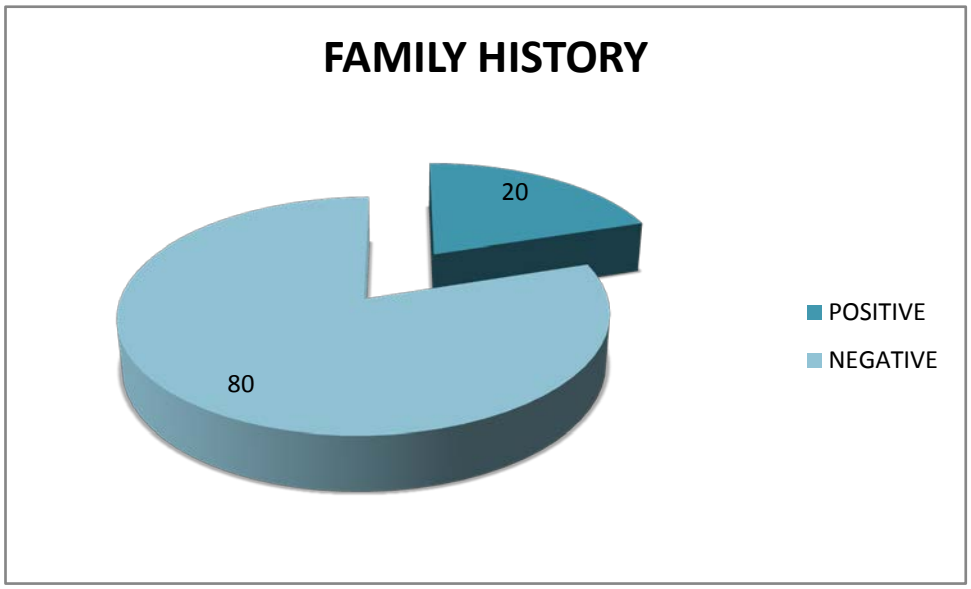
Out of 36 cases, 30 patients were non-vegetarian (83%).

FAMILY HISTORY

Table :5

S.NO	Family history	No.of cases	Percentage%
1.	Postive	6	20
2.	Negative	30	80

Out of 36 cases, 30 cases reported with negative family history (80%) and positive family history (20%).

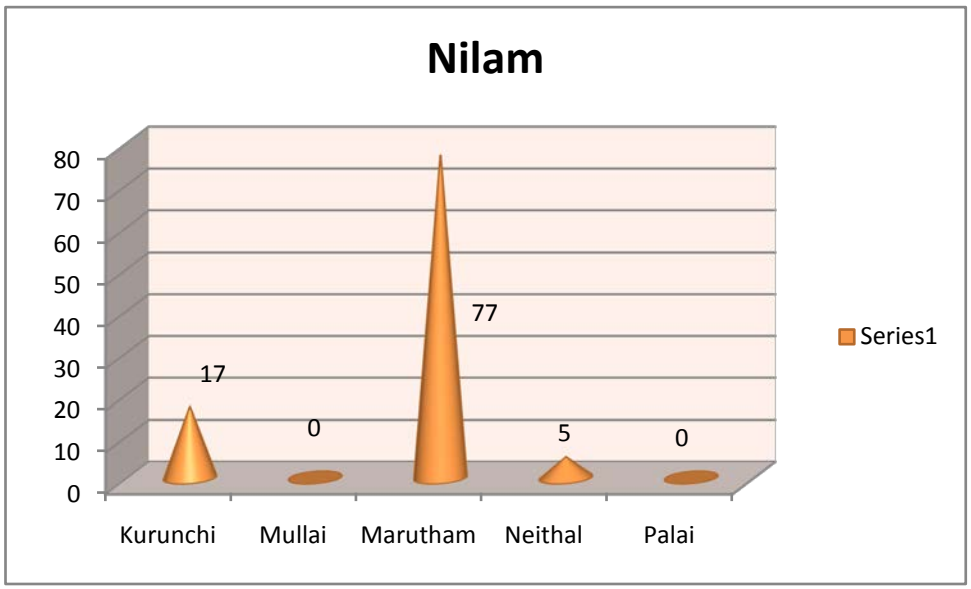


NILAM

Table :6

S.No	Nilam	No.of Cases	Percentage (%)
1.	Kurunchi	6	17
2.	Mullai	0	0
3.	Marutham	28	77
4.	Neithal	2	5
5.	Palai	0	0

out of 36 cases, 28 cases lives in marutha nilam(77%), 6 cases are reported in kurunchi nilam(17%) and 2 cases are reported in Neithal nilam(5%).

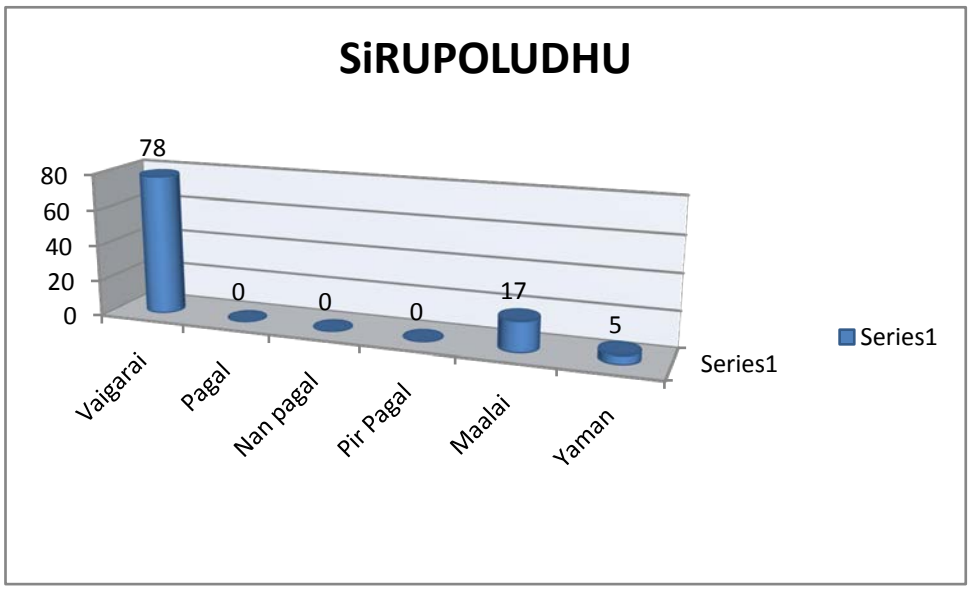


SIRUPOLUDHU

Table :7

S.No	Sirupoludhu	No.of Cases	Percentage (%)
1.	Vaigarai	28	78
2.	Pagal	0	0
3.	Nan pagal	0	0
4.	Pir Pagal	0	0
5.	Maalai	6	17
6.	Yaman	2	5

Out of 36 cases, 28 cases were affected in Vaigarai (78%), 6 cases were affected in Maalai(17%) and 2 cases were affected in Yamam(5%).

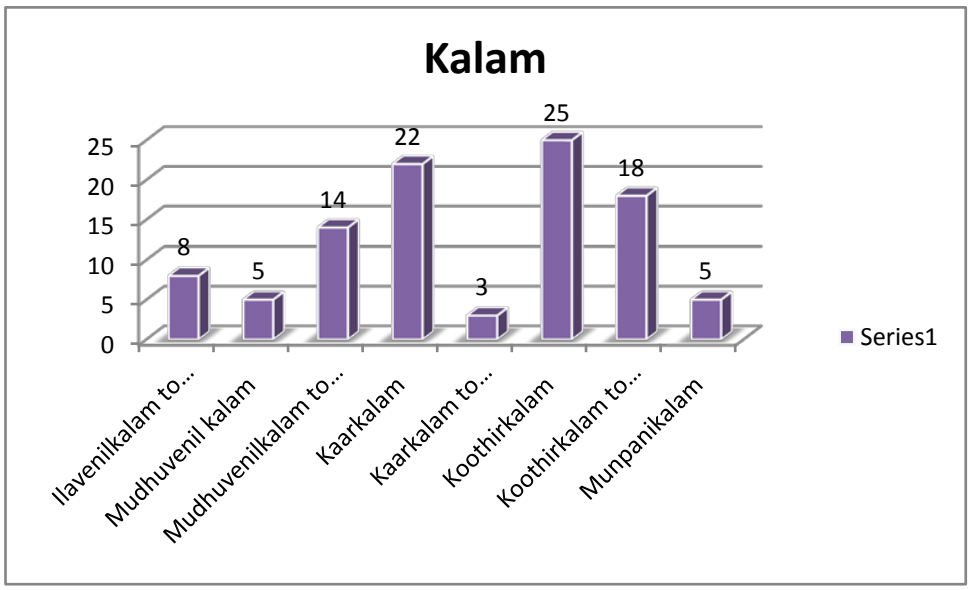


KALAM

Table :8

S.No	Kalam	No.of Cases	Percentage (%)
1.	Ilavenilkalam to Mudhuvenilkalam	3	8
2.	Mudhuvenil kalam	2	5
3.	Mudhuvenilkalam to Kaarkalam	5	14
4.	Kaarkalam	8	22
5.	Kaarkalam to Koothirkalam	1	3
6.	Koothirkalam	9	25
7.	Koothirkalam to Munpanikalam	6	18
8.	Munpanikalam	2	5

Out of 36 cases, 9 cases were repoted in koothirkalam(25%)

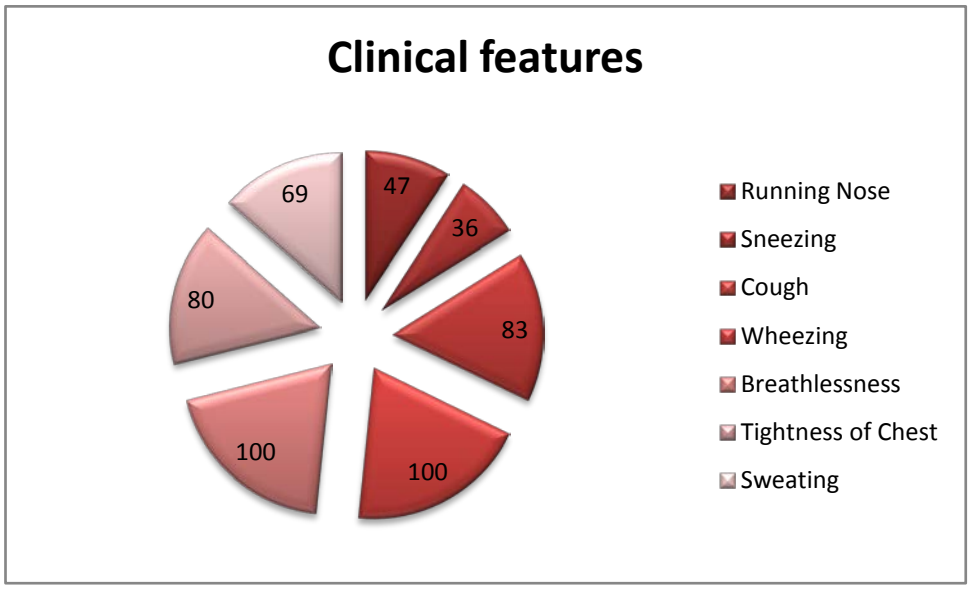


CLINICAL FEATURES

Table :9

S.No	Clinical Features	No.of Cases	Percentage (%)
1.	Running Nose	17	47
2.	Sneezing	13	36
3.	Cough without expectoration	30	83
4.	Wheezing	36	100
5.	Breathlessness	36	100
6.	Tightness of Chest	29	80
7.	Sweating	25	69

Out of 36 cases, all cases having whezzing and breathlessness(100%), 30 cases having cough without expectoration(83%), 29 cases having tightness of chest(80), 25 cases having sweating(69%), 17 cases having running nose(47%) and 13 cases having sneezing(36)



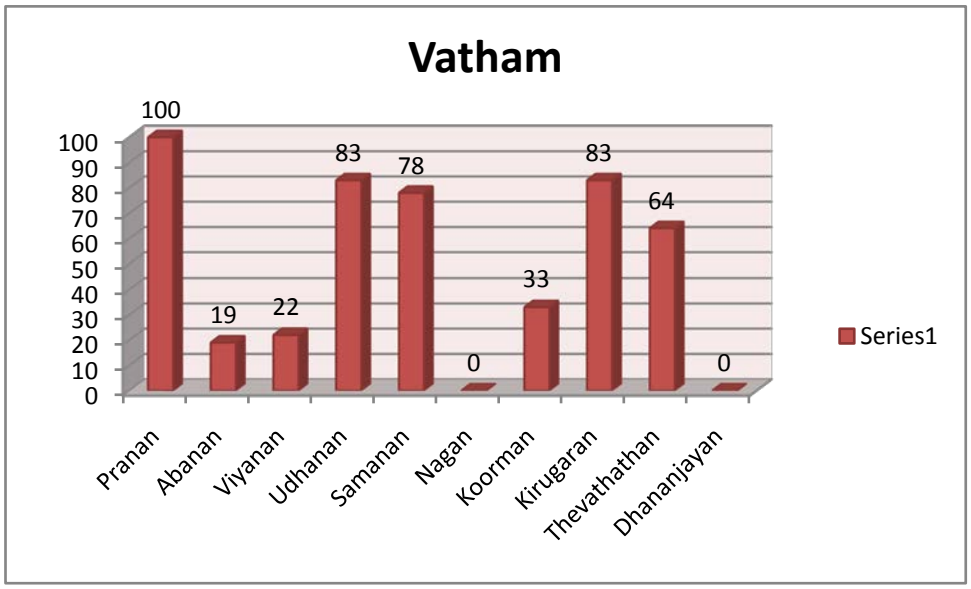
MUKKUTRA NILAI

VATHAM

Table :10

S.No	Vatham	No.of Cases	Changes	Percentage (%)
1.	Pranan	36	36	100
2.	Abanan	36	7	19
3.	Viyanan	36	8	22
4.	Udhanan	36	30	83
5.	Samanan	36	28	78
6.	Nagan	36	-	0
7.	Koorman	36	12	33
8.	Kirugaran	36	30	83
9.	Thevathathan	36	23	64
10.	Dhananjayan	36	-	0

Out of 36 cases, all cases are affected by pranan(100%),19% of the cases affected by Abanan, 22% are affected by Viyanan, 83% of cases are affected by Udhanan, 78% of cases are affected by Samanan, 33% of cases are affected by Koorman, 83% of cases are affected by Kirigaran, 64% af cases are affected by Thevathanthan.

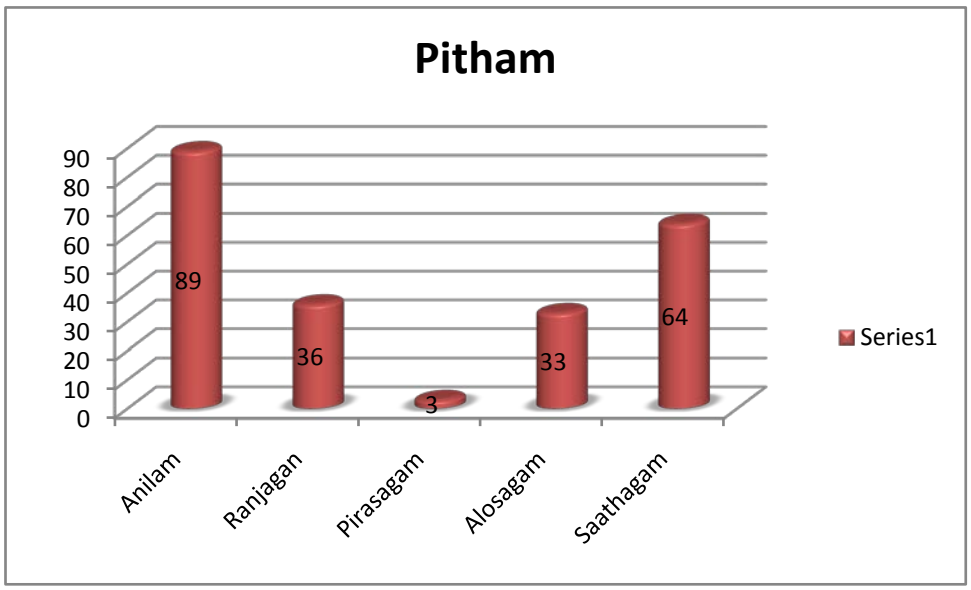


PITHAM

Table :11

S.No	Pitham	No.of Cases	Changes	Percentage (%)
1.	Anilam	36	32	89
2.	Ranjagan	36	13	36
3.	Pirasagam	36	1	3
4.	Alosagam	36	12	33
5.	Saathagam	36	23	64

Out of 36 cases, 32 cases are affected by anilam(89%), 36% of cases are affected by Ranjagam, 3 % are affected by Pirasagam, 33% are affected Alosagam, 64% are affected by Saathagam.

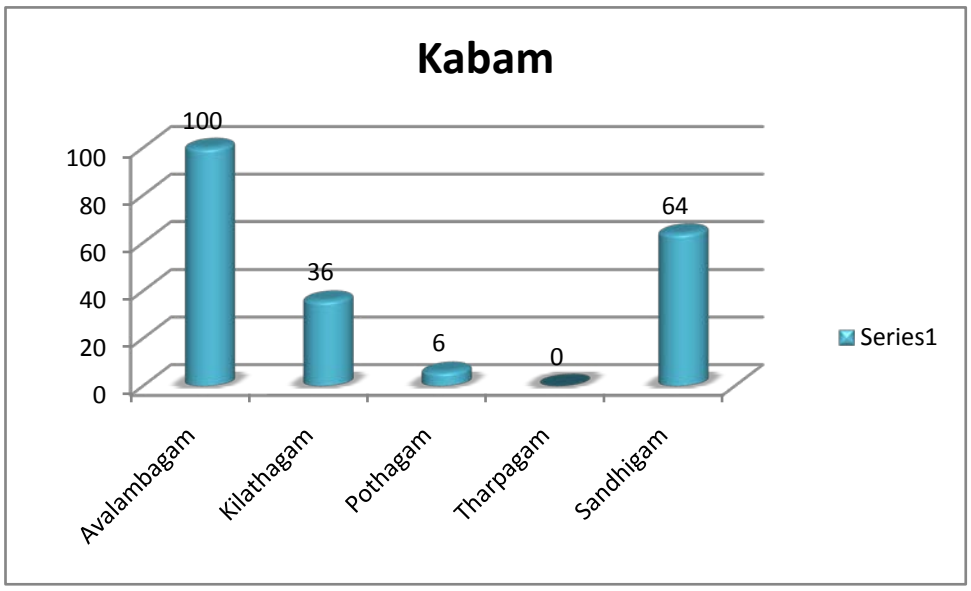


KABAM

Table :12

S.No	Kabam	No.of Cases	Changes	Percentage (%)
1.	Avalambagam	36	36	100
2.	Kilathagam	36	13	36
3.	Pothagam	36	2	6
4.	Tharpagam	36	-	0
5.	Sandhigam	36	23	64

Out of 36 cases, all cases are affected by avalambagam(100%) , 36% of cases are affected by Kilathagam, 6% are affected by pothagam, 64% of cases are affected by Sandhigam.

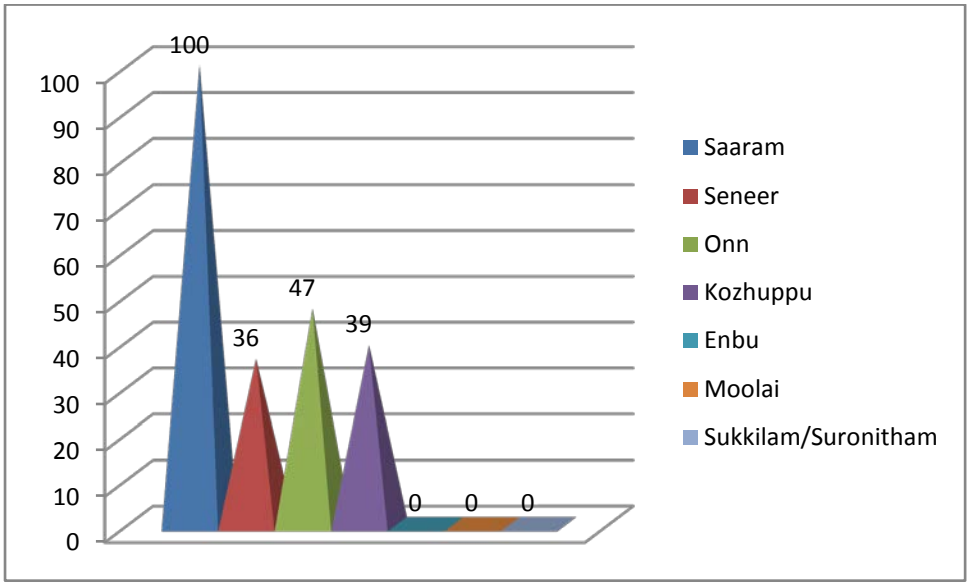


UDAL THADUKKAL

S.No	Udal thadukkal	No.of Cases	Changes	Percentage (%)
1.	Saaram	36	36	100
2.	Seneer	36	13	36
3.	Onn	36	17	47
4.	Kozhuppu	36	14	39
5.	Enbu	36	-	0
6.	Moolai	36	-	0
7.	Sukkilam/Suronitham	36	-	0

Out of 36 cases, all cases are affected by saaram (100%). 36% of cases are affected by Seneer, 47%of cases are affected by onn, 39% are affected by kozhuppu.

UDAL THADUKKAL



ENNVAGAI THERVUGAL

NAA

Sl.no	Op.No	MaaPadithal (Coating)	Naavin niram (Colour)	Vedippu (fissure)	Vaineerooral (Salivation)	Nirapulligal (Pigmentation)
1	44934	P	Red	P	P	A
2	42893	P	pink	A	A	A
3	48892	P	Red	P	A	A
4	53670	A	Red	A	A	A
5	66926	P	Pale	A	A	A
6	50478	A	Red	A	A	A
7	64959	P	Red	P	A	A
8	71781	P	Red	P	A	A
9	72124	P	Pale	P	A	A
10	72541	P	Pale	P	A	A
11	67322	A	Pale	A	A	P
12	58561	A	Red	P	A	P
13	50510	P	Red	A	A	A
14	73363	P	Red	P	A	A
15	73622	A	Red	P	A	P
16	75811	P	Pale	P	A	A
17	76236	A	Red	P	A	A
18	76404	A	Red	P	A	P
19	79885	A	Red	A	A	P
20	89059	P	Red	P	A	A
21	89126	P	Pale	P	A	A
22	90548	P	Pale	P	A	A
23	93799	A	Red	A	A	A
24	94682	P	Red	P	A	A
25	94984	A	Pale	A	A	A
26	95005	P	Pale	A	A	A
27	96493	A	Red	P	A	A
28	96820	A	Pale	A	P	A
29	96783	P	Red	A	A	A
30	98545	A	Red	P	A	A
31	99464	A	Red	A	A	A
32	99502	A	Red	A	P	A
33	101330	A	Red	A	A	A
34	106433	A	Red	A	A	A
35	1131	P	Pale	P	A	A
36	2182	A	Pale	P	A	A
P-Present, A-Absent						

Out of 36 cases, 18 cases were maa padithal (50%), 12 cases were affect by naavin niram (33%), 20 cases has vedippu (55%), 5 cases has nirapulligal(14%), 3 cases has vainer ooral (8%).

NIRAM

Sl.no	Op.No	Normal colour	Abnormal colour change
1	44934	P	A
2	42893	P	A
3	48892	P	A
4	53670	P	A
5	66926	A	A
6	50478	P	A
7	64959	P	A
8	71781	P	A
9	72124	P	A
10	72541	P	A
11	67322	P	A
12	58561	P	A
13	50510	P	A
14	73363	P	A
15	73622	P	A
16	75811	P	A
17	76236	P	A
18	76404	P	A
19	79885	P	A
20	89059	P	A
21	89126	P	A
22	90548	P	A
23	93799	P	A
24	94682	P	A
25	94984	P	A
26	95005	P	A
27	96493	P	A
28	96820	P	A
29	96783	P	A
30	98545	P	A
31	99464	A	P
32	99502	P	A
33	101330	P	A
34	106433	P	A
35	1131	P	A
36	2182	P	A
P-Present , A-Absent			

Out of 36 cases, 35 cases normal (99%) and 1 case showed abnormal colour change.

MOZHI

Sl.no	Op.No	Thazhaatha Oli	Sama Oli
1	44934	P	A
2	42893	P	A
3	48892	P	A
4	53670	A	P
5	66926	P	A
6	50478	P	A
7	64959	A	P
8	71781	P	A
9	72124	P	A
10	72541	P	A
11	67322	P	A
12	58561	P	A
13	50510	P	A
14	73363	P	A
15	73622	P	A
16	75811	P	A
17	76236	A	P
18	76404	P	A
19	79885	A	P
20	89059	P	A
21	89126	P	A
22	90548	P	A
23	93799	A	P
24	94682	P	A
25	94984	P	A
26	95005	P	A
27	96493	P	A
28	96820	P	A
29	96783	P	A
30	98545	P	A
31	99464	A	P
32	99502	P	A
33	101330	P	A
34	106433	P	A
35	1131	P	A
36	2182	P	A
P - Present, A-Absent			

Out of 36 cases, 30 cases were thazhaatha oli (83%) and 6 cases were sama oli (17%).

VIZHI

Sl.no	Op.No	Niram (Colour)	Neerthuvam (Moisture)	Erichchal (Burning sensation)	Any other Eye disease
1	44934	Moudy Conjuctiva	A	A	A
2	42893	White	A	A	A
3	48892	White	P	A	Dull Vision
4	53670	White	A	A	Dull Vision
5	66926	Red	A	A	A
6	50478	White	A	A	A
7	64959	White	P	A	A
8	71781	White	P	A	A
9	72124	Moudy Conjuctiva	P	A	A
10	72541	Moudy Conjuctiva	A	A	A
11	67322	White	A	A	A
12	58561	White	A	A	Dull vision
13	50510	White	A	A	A
14	73363	Moudy Conjuctiva	A	A	Dull vision
15	73622	Moudy Conjuctiva	A	A	Dull vision
16	75811	White	A	P	A
17	76236	White	A	A	Dull vision
18	76404	White	A	A	A
19	79885	White	A	A	Dull vision
20	89059	Moudy Conjuctiva	A	A	Dull vision
21	89126	White	P	A	A
22	90548	Moudy Conjuctiva	P	A	A
23	93799	White	A	A	A
24	94682	Red	A	A	A
25	94984	White	A	A	A
26	95005	Moudy Conjuctiva	A	A	Dull vision
27	96493	White	A	A	Dull vision
28	96820	White	P	A	A
29	96783	White	P	A	A
30	98545	Moudy Conjuctiva	A	A	A
31	99464	White	A	A	A
32	99502	White	A	A	A
33	101330	White	A	P	A
34	106433	White	A	A	A
35	1131	Moudy Conjuctiva	A	A	Dull vision
36	2182	White	A	A	Dull vision
P-Present, A-Absent					

Out of 36 cases, 10 cases had eye colour change (27%), 12 cases had dull vision (33%), 8 cases had moisture (22%) and 1 case had burning sensation (3%).

SPARISAM

Sl.no	Op.No	Thatpam	Viyaruvai
1	44934	I	I
2	42893	N	N
3	48892	I	I
4	53670	I	I
5	66926	I	I
6	50478	I	I
7	64959	I	I
8	71781	N	N
9	72124	I	I
10	72541	I	I
11	67322	I	I
12	58561	N	N
13	50510	N	N
14	73363	I	I
15	73622	I	I
16	75811	N	N
17	76236	I	I
18	76404	I	I
19	79885	N	N
20	89059	I	I
21	89126	I	I
22	90548	I	I
23	93799	I	I
24	94682	N	N
25	94984	N	N
26	95005	I	I
27	96493	I	I
28	96820	I	I
29	96783	I	I
30	98545	I	I
31	99464	N	N
32	99502	I	I
33	101330	N	N
34	106433	N	N
35	1131	I	I
36	2182	I	I
N-Normal, I-Increased			

Out of 36 cases, 25 cases shows increased thatpam and viyaruvai (69%) and 11 cases shows normal thatpam and viyaruvai (31%).

Naadi

Sl.no	Op.No	Vatha Pitham	Kaba Vatham	Kaba Pitham
1	44934	A	A	P
2	42893	A	A	P
3	48892	A	A	P
4	53670	P	A	A
5	66926	P	A	A
6	50478	A	A	P
7	64959	P	A	A
8	71781	P	A	A
9	72124	A	A	P
10	72541	A	A	P
11	67322	A	A	P
12	58561	A	A	P
13	50510	A	P	A
14	73363	P	A	A
15	73622	A	A	P
16	75811	A	A	P
17	76236	P	A	A
18	76404	A	A	P
19	79885	P	A	A
20	89059	P	A	A
21	89126	P	A	A
22	90548	A	A	P
23	93799	A	A	P
24	94682	P	A	A
25	94984	A	A	P
26	95005	A	A	P
27	96493	A	A	P
28	96820	A	A	P
29	96783	P	A	A
30	98545	P	A	A
31	99464	A	A	P
32	99502	P	A	A
33	101330	A	A	P
34	106433	P	A	A
35	1131	P	A	A
36	2182	P	A	A
P-Present,A-Absent				

Out of 36 cases, 19 cases are kaba pitham (53%), 16 cases are vatha pitham (44%) and 1 case is kaba vatham (3%).

MALAM

Sl.no	Op.No	No. of times per day	Quantity			Colour			Constipation
			Normal	Increased	Decreased	Yellow	Dark	Pale	
1	44934	1	P		A	P			A
2	42893	1	A		P	P			P
3	48892	1	P		A	P			A
4	53670	1	A		P	P			P
5	66926	1	P		A	P			A
6	50478	1	A		P	P			P
7	64959	1	P		A	P			A
8	71781	1	P		A	P			A
9	72124	1	P		A	P			A
10	72541	1	P		A	P			A
11	67322	1	P		A	P			A
12	58561	1	P		A	P			A
13	50510	1	P		A	P			A
14	73363	1	P		A	P			A
15	73622	1	A		P	P			P
16	75811	1	P		A	P			A
17	76236	1	P		A	P			A
18	76404	1	P		A	P			A
19	79885	1	P		A	P			A
20	89059	1	P		A	P			A
21	89126	1	P		A	P			A
22	90548	1	P		A	P			A
23	93799	1	P		A	P			A
24	94682	1	P		A	P			A
25	94984	1	P		A	P			A
26	95005	1	P		A	P			A
27	96493	1	P		A	P			A
28	96820	1	P		A	P			A
29	96783	1	P		A	P			A
30	98545	1	A		P	P			P
31	99464	1	P		A	P			A
32	99502	1	P		A	P			A
33	101330	1	A		P	P			P
34	106433	1	P		A	P			A
35	1131	1	A		P	P			P
36	2182	1	P		A	P			A
P-Present, A-Absent									

Out of 36 cases, 29 cases were normal (80%) and 7 cases were affected (20%).

Moothiram - Neerkuri

Sl.no	Op.No	Colour	Odour	Volume	Froth	Deposits
1	44934	Straw	P	N	A	A
2	42893	Straw	P	N	A	A
3	48892	Yellow	P	N	A	A
4	53670	Yellow	P	N	A	A
5	66926	Yellow	P	N	A	A
6	50478	Dark Yellow	P	N	A	A
7	64959	Straw	P	N	A	A
8	71781	Yellow	P	N	A	A
9	72124	Straw	P	N	A	A
10	72541	Straw	P	N	A	A
11	67322	Pale	P	N	A	A
12	58561	Yellow	P	N	A	A
13	50510	Yellow	P	N	A	A
14	73363	Straw	P	N	A	A
15	73622	Straw	P	N	A	A
16	75811	Pale	P	N	A	A
17	76236	Straw	P	N	A	A
18	76404	Yellow	P	N	A	A
19	79885	Straw	P	N	A	A
20	89059	Straw	P	N	A	A
21	89126	Straw	P	N	A	A
22	90548	Pale	P	N	A	A
23	93799	Straw	P	N	A	A
24	94682	Straw	P	N	A	A
25	94984	Straw	P	N	A	A
26	95005	Yellow	P	N	A	A
27	96493	Yellow	P	N	A	A
28	96820	Straw	P	N	A	A
29	96783	Straw	P	N	A	A
30	98545	Pale	P	N	A	A
31	99464	Straw	P	N	A	A
32	99502	Yellow	P	N	A	A
33	101330	Straw	P	N	A	A
34	106433	Pale	P	N	A	A
35	1131	Straw	P	N	A	A
36	2182	Straw	P	N	A	A
N- Normal, P-Present, A- Absent						

In all the cases neerkuri was normal (100%).

Moothiram - Neikuri

Sl.no	Op.No	Mela paraval (Slow Spread)	Viraindhu paraval(FastSpread)	Muthupol paraval(Stil l spread)	Saladaikan (Sieve like appearance)	Others
1	44934	A	A	P	A	A
2	42893	A	P	A	A	A
3	48892	A	A	A	A	Bird shape
4	53670	A	A	A	A	Bird shape
5	66926	A	A	P	A	A
6	50478	A	P	A	A	A
7	64959	A	A	P	A	A
8	71781	A	A	A	A	Bird shape
9	72124	A	A	P	A	A
10	72541	A	A	P	A	A
11	67322	A	P	A	A	A
12	58561	A	A	A	P	A
13	50510	A	A	P	A	A
14	73363	A	A	P	A	A
15	73622	P	A	A	A	A
16	75811	A	A	P	A	A
17	76236	A	A	P	A	A
18	76404	A	A	P	A	A
19	79885	A	A	P	A	A
20	89059	A	A	P	A	A
21	89126	A	A	A	P	A
22	90548	A	P	A	A	A
23	93799	A	A	P	A	A
24	94682	A	A	A	P	A
25	94984	A	A	P	A	A
26	95005	A	A	A	P	A
27	96493	A	A	P	A	A
28	96820	A	A	P	A	A
29	96783	A	A	P	A	A
30	98545	P	A	A	A	A
31	99464	A	A	P	A	A
32	99502	A	A	A	P	A
33	101330	A	A	P	A	A
34	106433	A	A	A	P	A
35	1131	A	A	A	P	A
36	2182	P	A	A	A	A
P-Present, A- Absent						

Out of 36 cases, 19 cases shows muthupol paraval (53%) ,7 cases shows saladaikan (19%), 4 cases viraindhu paraval (12%), 3 cases shows mela paraval (8%) and 3 case shows bird shape (8%).

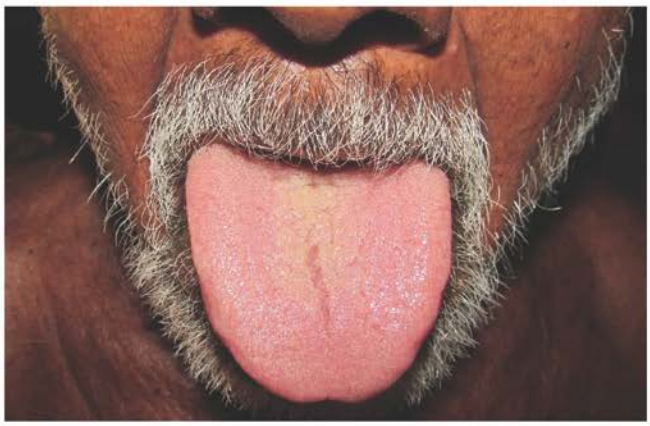
Manikadainool

Sl.no	Op.No	Manikadainool
1	44934	9(3/4)
2	42893	8(1/4)
3	48892	10(1/2)
4	53670	10
5	66926	10(3/4)
6	50478	9(3/4)
7	64959	10(1/2)
8	71781	9(1/4)
9	72124	9
10	72541	9(1/2)
11	67322	11(1/2)
12	58561	8(1/2)
13	50510	9(1/2)
14	73363	12
15	73622	9(1/4)
16	75811	10
17	76236	9(1/2)
18	76404	10
19	79885	8
20	89059	9 (1/2)
21	89126	10 (1/4)
22	90548	8
23	93799	9
24	94682	9(1/2)
25	94984	9
26	95005	9
27	96493	10(1/2)
28	96820	9(1/2)
29	96783	9(1/2)
30	98545	9(1/4)
31	99464	9(1/2)
32	99502	10(1/2)
33	101330	10
34	106433	9(1/2)
35	1131	8(1/2)
36	2182	9(1/2)

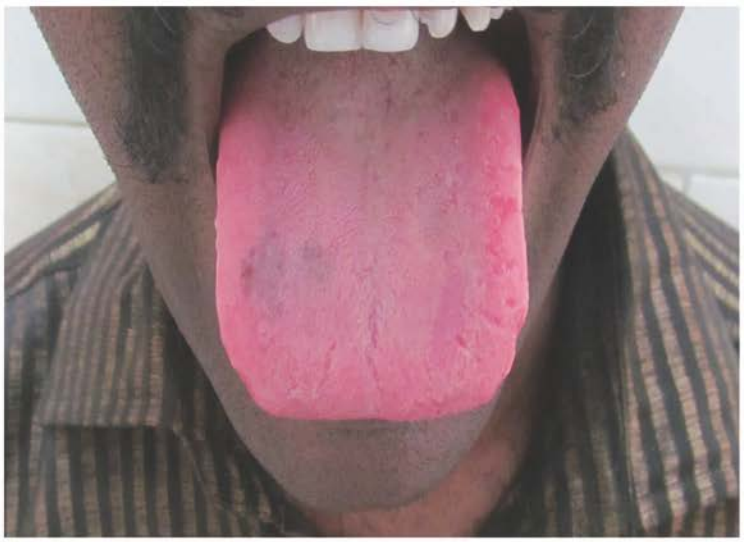
Out of 36 cases, all cases have different manikadainool.

NAA

OP.No:66926 Age : 60 Sex : Male



OP.No:76404 Age : 32 Sex : Male



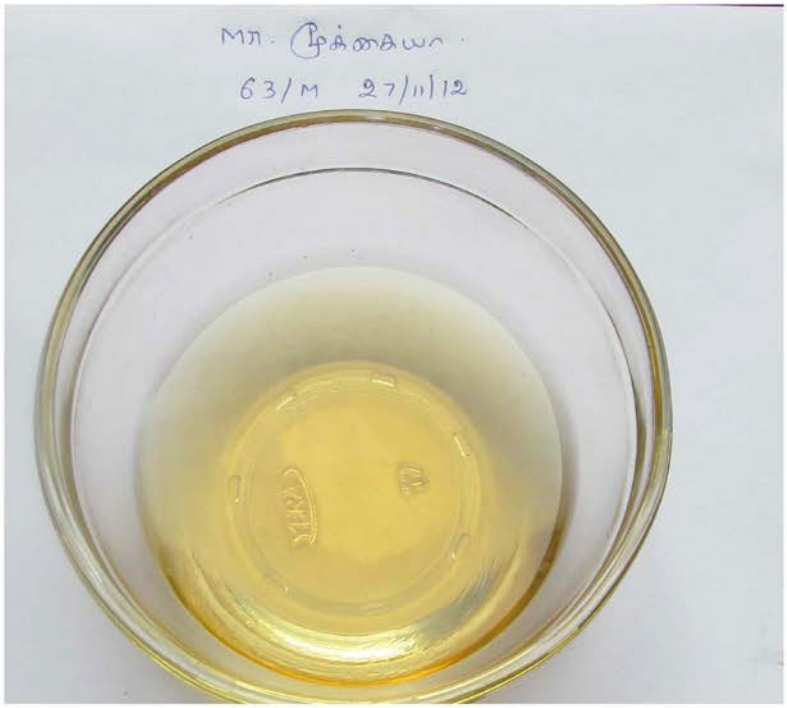
VIZHI

OP.No: 66926 Age : 60 Sex : Male

OP.No:76404 Age :32 Sex : Male

Neerkuri

OP.No:96493 Age :63 sex: Male



Neikuri

NEERKURI

OP.No : 95005 Age : 65 Sex : Male

NEIKURI

NEERKURI
OP.No:48892 Age:57 Sex:Male

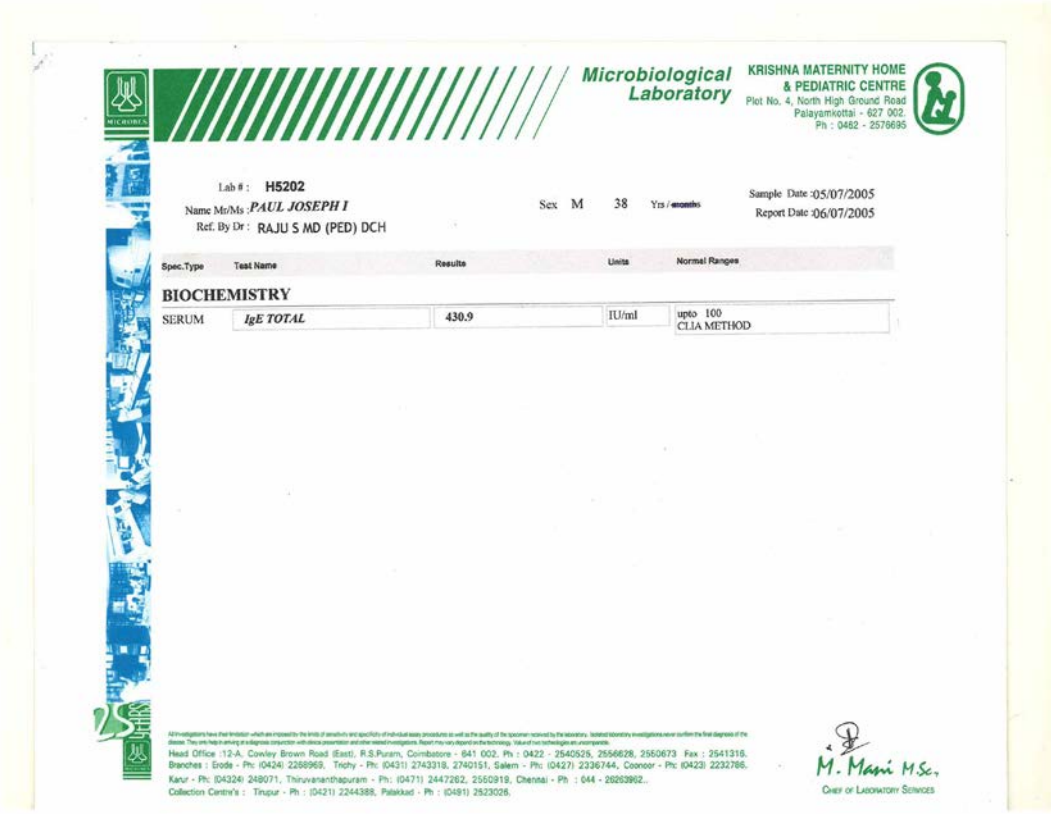
NEIKURI

LABORATORY INVESTIGATION

S.No	OP No	Age/Sex	BLOOD INVESTIGATION							BIO CHEMICAL			URINE ANALYSIS		
			TC Cells /Cu.mm	DC			ESR		Hb gms%	Sugar (R) mgms %	Urea mgms %	S.Cholesterol gms%	Albumin	Sugar	depoait
				P	L	E	1/2 hr	1 hr							
1	44934	60male	9700	73	24	3	32	64	13.2	131	27	166	Nil	Nil	Nil
2	42893	53male	9100	71	28	4	4	10	11	109	26	181	Nil	Nil	Nil
3	48892	57male	9400	59	32	9	20	45	11	72	24	221	Nil	Nil	Nil
4	53670	45male	9900	70	28	2	15	31	11.5	99	18	185	Nil	Nil	1 to 2
5	66926	60male	7400	64	34	2	20	41	12	120	22	245	Nil	Nil	Nil
6	50478	20male	8900	64	32	4	6	12	14	133	29	185	Nil	Nil	Nil
7	64959	53female	8900	60	34	6	13	27	10.5	146	26	140	Nil	Nil	Nil
8	71781	58male	8300	61	36	3	6	13	11	138	28	197	Nil	Nil	Nil
9	72124	63male	9400	65	32	3	37	61	11.5	141	17	193	Nil	Nil	2 to 4
10	72541	63male	9000	59	27	14	40	85	11.4	130	62	122	Nil	Nil	Nil
11	67322	35female	9000	70	27	3	10	20	11.5	100	21	185	Nil	Nil	Nil
12	58561	57male	7500	62	34	4	2	6	9.5	152	37	145	Nil	Nil	Nil
13	50510	30male	10000	34	48	18	15	30	13	103	21	170	Nil	Nil	Nil
14	73363	60female	8900	75	23	2	15	32	10.5	107	25	174	Nil	Nil	Nil
15	73622	62male	9700	65	37	7	20	40	14.5	142	31	153	Nil	Nil	Nil
16	75811	65female	8600	68	23	9	6	12	9.5	76	17	250	Nil	Nil	Nil
17	76236	47male	7800	53	38	2	13	28	13.5	123	20	170	Nil	Nil	Nil
18	76404	32male	5600	40	47	13	2	8	12	71	30	164	Nil	Nil	Nil

LABORATORY INVESTIGATION

			BLOOD INVESTIGATION						**BIO CHEMICAL**			**URINE ANALYSIS**		
S.No	OP.No	Age/sex	Tc cells/cumm	Dc			ESR		Hb gms%	Sugar (R) mgms%	Urea mgms%	S.Chole storl %	Albumin	Sugar	Deposit
				P	L	E	1/2hr	1hr							
19	79885	39male	8400	55	40	5	3	7	11	87	24	182	Nil	Nil	Nil
20	89059	62male	7800	61	24	6	14	26	14.5	103	27	168	Nil	Nil	Nil
21	89126	45male	8200	56	38	6	8	16	12	75	25	165	Nil	Nil	Nil
22	90548	65male	6700	63	32	5	39	62	8.4	68	93	196	Nil	Nil	2to 3
23	93799	22fema	8100	61	34	5	10	20	9	71	29	178	Nil	Nil	Nil
24	94682	40male	8400	56	38	6	12	20	11	75	25	165	Nil	Nil	Nil
25	94984	44fema	9300	65	32	3	5	10	10.2	70	24	186	Nil	Nil	2 to 4
26	95002	65male	9100	61	34	5	12	21	12	78	29	160	Nil	Nil	Nil
27	96493	63male	8700	61	36	3	30	60	13	89	21	141	Nil	Nil	Nil
28	96820	39fema	8200	64	31	5	21	40	11	87	29	192	Nil	Nil	Nil
29	96783	55male	9200	61	63	6	18	35	13	76	25	163	Nil	Nil	Nil
30	98245	64male	9400	62	31	7	11	20	11	75	24	182	Nil	Nil	Nil
31	99464	15male	9300	56	38	6	10	20	12	75	25	197	Nil	Nil	4 to 6
32	99502	41male	9500	66	32	2	5	12	12.4	70	24	210	Nil	Nil	Nil
33	101330	38male	9100	65	31	4	21	40	11	87	21	196	Nil	Nil	Nil
34	106433	28fema	9000	60	33	7	18	35	11	85	24	168	Nil	Nil	Nil
35	1131	60male	9600	61	33	6	14	25	12	80	31	201	Nil	Nil	Nil
36	2183	58male	8100	57	41	2	2	4	10.2	75	32	198	Nil	Nil	Nil



Microbiological Laboratory

KRISHNA MATERNITY HOME & PEDIATRIC CENTRE
Plot No. 4, North High Ground Road
Palayamkottai - 627 002.
Ph : 0462 - 2576695

Lab # : **H5202**
Name Mr/Ms : *PAUL JOSEPH I*
Ref. By Dr : RAJU S MD (PED) DCH

Sex M 38 Yrs / ~~months~~

Sample Date :05/07/2005
Report Date :06/07/2005

Spec.Type	Test Name	Results	Units	Normal Ranges
BIOCHEMISTRY				
SERUM	*IgE TOTAL*	430.9	IU/ml	upto 100 CLIA METHOD

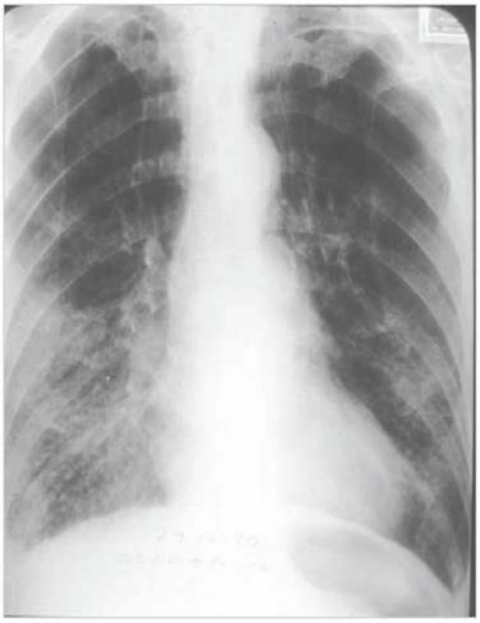
All investigations have their limitation which are imposed by the limits of sensitivity and specificity of individual assay procedures as well as the quality of the specimen received by the laboratory. Isolated laboratory investigations never confirm the final diagnosis of the disease. They only help in arriving at diagnosis in conjunction with clinical presentation and other related investigations. Report may vary depend on the technology. Value of two technologies are incomparable.

Head Office :12-A, Cowley Brown Road (East), R.S.Puram, Coimbatore - 641 002. Ph : 0422 - 2540525, 2556628, 2550673 Fax : 2541316.
Branches : Erode - Ph: (0424) 2268969, Trichy - Ph: (0431) 2743318, 2740151, Salem - Ph: (0427) 2336744, Coonoor - Ph: (0423) 2232786.
Karur - Ph: (04324) 248071, Thiruvananthapuram - Ph: (0471) 2447262, 2550919, Chennai - Ph : 044 - 26263962..
Collection Centre's : Tirupur - Ph : (0421) 2244388, Palakkad - Ph : (0491) 2523026.

M. Mani M.Sc.,
Chief of Laboratory Services

Chest x-ray

OP .No: 76236 Age : 47 Sex : Male



RECORDERS & MEDICARE SYSTEMS

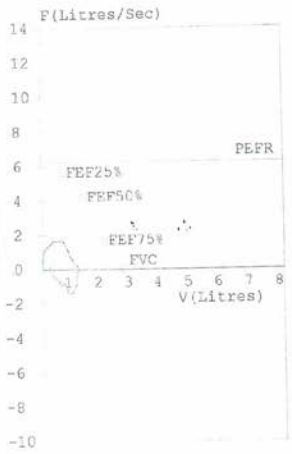
181/5, Phase-1, Industrial Area, Chandigarh-160002

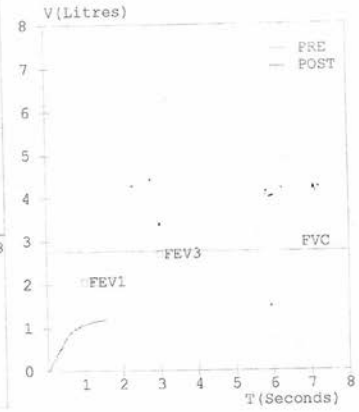
Patient: MRS GANTHIMATHI
Refd. By: DR.G.SUNIL KUMAR MD(s)
Pred.Eqns: RECORDERS
Date : 23/09/2012 ID: 1154

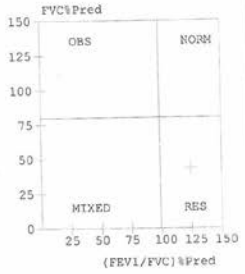
Age : 60 Years
Height : 172 Cms
Weight : 60 Kgs
BSA : 1.7 m2

Sex : Female
Smoker : No
Eth. Corr: 100
Temp : 82 degrees

RMS Medspiror







FVC Results

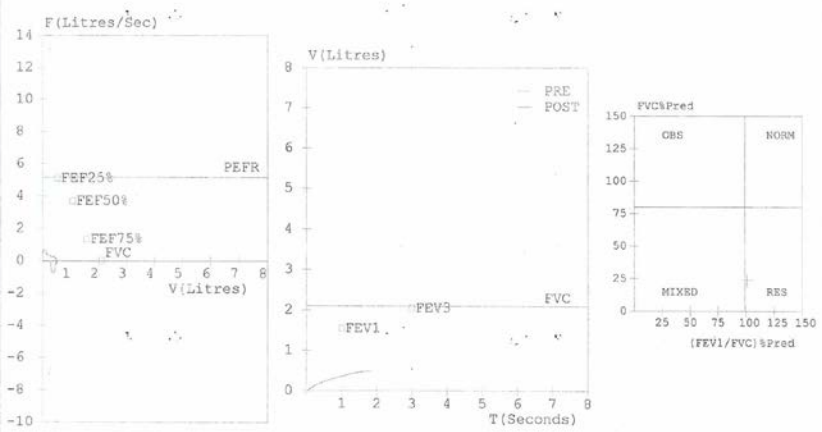
Parameter		Pred	Pre	%Pred	Post	%Pred	%Imp
FVC	(L)	02.76	01.18	043	-----	---	---
FIVC	(L)	-----	00.84	---	-----	---	---
FEV.5	(L)	-----	00.79	---	-----	---	---
FEV1	(L)	02.05	01.09	053	-----	---	---
FEV3	(L)	02.68	01.18	044	-----	---	---
PEFR	(L/s)	06.25	01.64	026	-----	---	---
PIFR	(L/s)	-----	01.43	---	-----	---	---
FEF25-75	(L/s)	02.76	01.41	051	-----	---	---
FEF75-85	(L/s)	-----	00.62	---	-----	---	---
FEF.2-1.2	(L/s)	04.23	00.71	017	-----	---	---
FEF 25%	(L/s)	05.65	01.52	027	-----	---	---
FEF 50%	(L/s)	04.21	01.64	039	-----	---	---
FEF 75%	(L/s)	01.67	00.85	051	-----	---	---
FEV.5/FVC	(%)	-----	66.95	---	-----	---	---
FEV1/FVC	(%)	74.28	92.37	124	-----	---	---
FEV3/FVC	(%)	97.10	100.00	103	-----	---	---
FVC Time	(Sec)	-----	01.53	---	-----	---	---
ExplTime	(Sec)	-----	00.25	---	-----	---	---

Pre Medication Report Indicates
Early Small Airway Obstruction as FEF 25-75 %Pred or PEFR %Pred < 70
Severe Restriction as (FEV1/FVC)%Pred >99 and FVC%Pred <44

RECORDERS & MEDICARE SYSTEMS

181/5, Phase-1, Industrial Area, Chandigarh-160002

Patient: MRS. YOGINI S		Age	: 65 Years	Sex	: Female
Refd. By: DR G SUNIL KUMAR	MD(s)	Height	: 155 Cms	Smoker	: No
Pred.Eqns: RECORDERS		Weight	: 58 Kgs	Eth. Corr:	100
Date : 26/09/2012	ID: 1160	BSA	: 1.6 m2	Temp :	82 degrees



FVC Results

Parameter		Pred	Pre	%Pred	Post	%Pred	%Imp
FVC	(L)	02.10	00.50	024	-----	---	---
FIVC	(L)	-----	00.20	---	-----	---	---
FEV.5	(L)	-----	00.24	---	-----	---	---
FEV1	(L)	01.54	00.37	024	-----	---	---
FEV3	(L)	02.04	00.50	025	-----	---	---
PEFR	(L/s)	05.16	00.67	013	-----	---	---
PIFR	(L/s)	-----	00.77	---	-----	---	---
FEF25-75	(L/s)	02.19	00.29	013	-----	---	---
FEF75-85	(L/s)	-----	00.18	---	-----	---	---
FEF.2-1.2	(L/s)	03.36	00.67	020	-----	---	---
FEF 25%	(L/s)	05.10	00.49	010	-----	---	---
FEF 50%	(L/s)	03.69	00.30	008	-----	---	---
FEF 75%	(L/s)	01.34	00.24	018	-----	---	---
FEV.5/FVC	(%)	-----	48.08	---	-----	---	---
FEV1/FVC	(%)	73.33	74.00	101	-----	---	---
FEV3/FVC	(%)	97.14	100.00	103	-----	---	---
FVC Time	(Sec)	-----	01.88	---	-----	---	---
ExplTime	(Sec)	-----	00.09	---	-----	---	---

Pre Medication Report Indicates
Early Small Airway Obstruction as FEF 25-75 %Pred or PEFR %Pred < 70
Severe Restriction as (FEV1/FVC)%Pred >99 and FVC%Pred <44

DIFFERENTIAL DIAGNOSIS

பித்த காசம்

"சீரான இருமல்மிகப் புரட்ட லாகித்

தித்தித்து உப்புரைக்குஞ் சர்த்தி யுண்டாம்

தாராக தலையுடம்பு தான்வ லிக்கும்

தாகித்துக் குரல்கம் மும்ரத்தம் வீழும்

ஆராக வங்கந்தான் மிகவி ளைக்கும்

அண்ணந்தான் செல்லாமற் புளித்தேக் காகும்

மாராமயிர் கூச்சுச் சுரமுண் டாம்

மதி மயங்கும் பித்தகா சத்தின் வண்மை"

-யூகி வைத்திய சிந்தாமணி

In Pitha kasam, even though persistent cough, sensation of sweet and salt taste in the tongue, vomiting, headache, body pain, burning sore throat, haemoptysis, loss of body weight, anorexia with sour taste regurgitation horripillation, fever and state of confusion are present, but the special symptoms of manthara kasam such as dyspnoea, chest tightness, wheezing are not present.

கப காசம்

"சாற்றவே இருமலோடு இளைப்பு முண்டாய்ச்

சார்ந்தபீ ளையுமுச்சு மிகுந்து வாங்கும்

ஆற்றவே அடிவயிறு மந்தம் பற்றி

அழகாகு முருவிழித்து உடம்பு வற்றும்

சோற்றவே சுரமொடு தியக்க முண்டாய்ச்

சித்தமே சிறுகடுப்பாற் தேக மெங்குஞ்

தீற்றவே சிறுகடுப்பாற் தேக மெங்குஞ்

சிலேட்டுமத்தின் சாகமென்றே செப்ப லாமே"

-யூகி வைத்திய சிந்தாமணி

In kaba kasam, even continuous productive cough, facial swelling, running nose, mucoprulent discharge, tachyponea, fever, confusion, loss of weight, vomitting are present, but in manthara kasam the above symptoms like loss of weight, fever, and mucoprulent discharge are present.

DISCUSSION & SUMMARY

As per WHO report the sufferers in India has an estimated 15-20 million asthmatics.A rough estimate indicates a prevalence of between 10% and 15% in 5-11 year old children. The diagonistic methodology in siddha system of medicine enroots on Envagai thervugal is the need of hour. In order to make a correct diagnosis and a better treatment plan in siddha, hence the author took the task to evaluate the disease “Manthara kasam” through siddha diagnostic tools.

AGE AND SEX REFERENCES:

In this study totally 36 patients were put on, of them 27(75%) were male and 9(25%) were female, belongs to all age groups starting from 15 to 65 years old.

SOCIO ECONOMIC STATUS:

From the result this disease is more common in poor socio-economic status (72%).

DIET & PERSONAL HABITS:

Out of 36 cases, 30 patients were non-vegetarian (83%).

FAMILY HISTORY:

Out of 36 cases, 30 cases reported with negative family history (80%).

NILAM:

Out of 36 cases, 28 cases lives in marutha nilam (77%).

SIRUPOLUDHU:

Out of 36 cases, 28 cases were affected in Vaigarai (78%).

KALAM

Out of 36 cases, 9 cases were repoted in koothirkalam (25%).

CLINICAL FEATURES:

Out of 36 cases, all cases (100%) had whezzing and breathlessness.

MUKKUTRA NILAI:

VATHAM

Out of 36 cases, all cases were affected by pranan (100%),

83% of cases were affected by Udhanan,

78% of cases were affected by Samanan,

83% of cases were affected by Kirigaran,

64% af cases were affected by Thevathathan.

PITHAM:

Out of 36 cases, 32 cases were affected by Anilam (89%),

64% are affected by Saathagam.

KABAM:

Out of 36 cases, all cases were affected by Avalambagam (100%),

64% of cases are affected by Sandhigam.

UDAL KATTUGAL:

Out of 36 cases, all cases are affected by saaram (100%).

36% of cases are affected by Seneer,

47%of cases are affected by onn,

39% are affected by kozhuppu.

ENNVAGAI THERVUGAL

NAA:

Out of 36 cases, 18 cases were maa padithal (50%),

20 cases have vedippu (55%).

12 cases were affected with abnormal naa niram (33%).

The Maa padithal and vedippu in the “Naa” can be correlated with other diagnostic tool for better diagnosis.

NIRAM:

Out of 36 cases, 35 cases normal (99%) and 1 case showed abnormal colour change.

Roughly all the cases showed normal Niram, hence this tool have no diagnostic value in “Manthara kasam”

MOZHI:

Out of 36 cases, 30 cases were thazhantha oli (83%) and 6 cases were Sama oli (17%).

The tool “Mozhi” indicates not only the sound from vocal cord (voice), in addition any sound that produced by the patient should be measured and analysed through this diagnostic tool.

The thazhantha oli is the measurement indicates both the low pitched voice and also the sound produced by the affected Pranamaya kosam.

In Manthara kasam involvement of the pranamaya kosam, producing “Hissing sound of snake” were noted in more than 80% cases which is exactly as said in literature holds a good diagnostic clue.

VIZHI:

Out of 36 cases, 10 cases had eye colour change (27%),

12 cases had dull vision (33%),

8 cases had moisture (22%).

There cannot be any interpretation could be made with this result.

SPARISAM:

Out of 36 cases, 25 cases shows increased thatpam and viyaruvai (69%)

11 cases show normal thatpam and viyaruvai (31%).

From the above results the sparisam (thatpam and viyaruvai- also said in the song) holds some diagnostic clues that can be interpretated with other relevant diagnostic tools.

NAADI:

Out of 36 cases, 19 cases are kaba pitham (53%) & 16 cases are vatha pitham (44%).

The above two naadi nadai felt in the study patients holds a good diagnostic clue in “Manthara kasam” which is the same as mentioned in the literature.

MALAM

Out of 36 cases, 29 cases were normal (80%) and 7 cases were affected (20%).

Since the majority of cases were no abnormal records for the tool “Malam” it has no diagnostic value in the “Manthara kasam”

MOOTHIRAM-NEERKURI:

In all the cases neerkuri was normal (100%).

Therefore Neerkuri has no role in the diagnosis of “Manthara kasam”.

MOOTHIRAM-NEIKURI:

Out of 36 cases, 19 cases shows muthupol paraval-Pearl like appearance (53%) & 7 cases shows saladaikan-Sieve like pattern (19%),

According to “theraiyar” the muthupol paraval and saladaikan in neikuri indicates the kaba disease. In this study the above two pattern were recorded in 72% cases mixedly (since Manthara kasam comes under kaba disease). Hence this tool giving a hope in better diagnosis and prognosis in “Manthara kasam”.

MANIKADAINOOL:

An uneven measurement of Manikadainool were recorded therefore it has no diagnostic importance in “Manthara kasam”.

CONCLUSION

- Envagai thervu reveals the dearranged humor of the disease, diagnostic and prognostic value of the disease and fate of the disease.
- In Envagai thervu, naadi and neikuri has more significant in diagnostic , prognostic value of the disease and the correlation of the tools mozhi and sparisam can be considered in arriving a perfect diagnosis, prognosis and also in designing the treatment protocol.
- Manikadainool not play a major role in the diagnosis of manthara kasam.
- Manthara Kasam can be diagnosed via clinical history and clinical symptoms and Envagai thervugal.
- “Manthara kasam” may be correlates with Bronchial asthma, which has given revalence to modern clinical entity.

GOVERNMENT SIDDHA MEDICAL COLLEGE

PALAYAMKOTTAI-627002

SCREENING COMMITTEE

Candidate Reg no: 32103010

This is to certify that the dissertation topic "A Study on diagnostic methodology of **MANTHARA KAASAM** in the context of **Ennvagai thervugal**" have been approved by Screening Committee.

S.No	NAME	SIGNATURE
1.	Prof.Dr.N.Chandramohan Doss,MD(S) Principal and Chairman.	
2.	Prof.Dr.R.Thangamoney,MD(S)	
3.	Prof.Dr.A.Subramanian,MD(S)	

(Kindly make sure that the minutes of the meeting duly signed by all the participation are maintained by the college office)

GOVT SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI.

DEPARTMENT OF PG NOI NAADAL

A STUDY ON DIAGNOSTIC METHODOLOGY OF

"MANTHARA KASAM "

IN THE CONTEXT OF ENNVAGAI THERVUGAL.

FORM I

SCREENING AND SELECTION PROFORMA

1. O.P.No _____ 2. I.P No _____ 3. Bed No: _____

4. S.No: _____

5. Name: _____6. Age (years): ☐

7. Gender: M ☐ F ☐

8. Occupation: _____ 9.Income: _____

10. Address: ----------

11. Contact No: ----------

12. E-mail : ----------

CRITERIA FOR INCLUSION:

	YES	NO
1. Both sex	☐	☐
2. Age between 15-65 years	☐	☐
3. Symptoms of cough, wheeze and breathlessness	☐	☐
4. Family history	☐	☐
5. History of any allergy	☐	☐

CRITERIA FOR EXCLUSION:

	YES	NO
1. Tuberculosis	☐	☐
2. Chronic bronchitis	☐	☐
3. Cardiac asthma	☐	☐
4. Pneumonia	☐	☐

Date: Signature:

GOVT SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI.

DEPARTMENT OF PG NOI NAADAL

A STUDY ON DIAGNOSTIC METHODOLOGY OF

"MANTHARA KASAM"

IN THE CONTEXT OF ENNVAGAI THERVUGAL.

FORM I-A

HISTORY PROFORMA

1. SI.No of the case: _____

2. Name: _____ Height: _____ cms

Weight: _____ Kg

3. Age (years): _____ DOB ☐☐ ☐☐ ☐☐☐☐

D D M M Y E A R

4. Educational Status:

1) Illiterate ☐ 2) Literate ☐ 3) Student ☐ 4) Graduate/Post graduate ☐

5. Nature of work:

1) Sedentary work ☐

2) Field work with physical labour ☐

3) Field work Executive ☐

6. Annual Income of the family: _____

7. Total no. of members shares the income: Adult ☐ Children ☐

8. Complaints and Duration:

_____

_____

_____

9. History of present illness:

_____

_____

_____

10. History of Past illness:

	1. Yes	2. No
Diabetes mellitus	☐	☐
Systemic hypertension	☐	☐
Ischemic heart disease	☐	☐
Dyslipidaemia	☐	☐
Jaundice	☐	☐
Any drug allergy	☐	☐
Any surgeries	☐	☐
Tuberculosis	☐	☐

11. Habits: Yes No

Smoking (Cigar/Beedi) ☐ ☐

Alcohol (Occasional/Regular) ☐ ☐

Drug Addiction ☐ ☐

Betel nut chewer: ☐ ☐

Tea (No. of times) ☐ ☐

Coffee (No. of times) ☐ ☐

Type of diet V ☐ NV ☐ M ☐

12. Personal history:

Marital status: Married ☐ Unmarried ☐

Consanguineous marriage: Yes ☐ No ☐

No. of children: Male: _____ Female: _____

13. Family history:

History of similar symptoms

	Yes	No
Father	☐	☐
Mother	☐	☐
Other Relations	☐	☐

14. RESPIRATORY SYSTEM EXAMINATION:-

A) INSPECTION:-

	Normal	Abnormal
1.Shape of the chest	☐	☐
2.Movement of the chest	☐	☐
3.Rate of respiration	☐	☐
4.Rythm	☐	☐
5.Chest expansion	☐	☐

B)PALPATION:-

	Present	Absent
1.Swelling	☐	☐
2.Pain and tenderness	☐	☐
3.Tracheal position	☐	☐
4.Cardiac impulse	☐	☐
5.Symmetry	☐	☐
6.Tactile vocal fermitus	☐	☐

C)PERCUSSION:-

	Present	Absent
1.Resonance	☐	☐
2.Dullness	☐	☐
3.Pain and tenderness	☐	☐

D) AUSCULTATION:-

1.Vesicular breath sound:-

	Yes	No
Vesicular breath sound with prolonged expiration	☐	☐

2.Added sounds:-

	Yes	No
Expiratory ronchi	☐	☐

15. GENERAL ETIOLOGY FOR ”MANTHARA KASAM”:

	Yes	No
1. Allergy	☐	☐
2. Infection	☐	☐
3. Exercise	☐	☐
4. Psychological factors	☐	☐
5. Change of temperature	☐	☐
6. Humidity	☐	☐
7. Smoking	☐	☐
8. Obesity	☐	☐

16. CLINICAL SYMPTOMS OF ‘’MANTHARA KASAM’’

	Present	Absent
1. Cough without expectorant	☐	☐
2. Wheeze	☐	☐
3. Breathlessness	☐	☐
4. Chest tightness	☐	☐
5. Running nose	☐	☐
6. Sneezing	☐	☐
7. Sweating all over the body	☐	☐

GOVT SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI.

A STUDY ON DIAGNOSTIC METHODOLOGY OF

"MANTHARA KASAM"

IN THE CONTEXT OF ENNVAGAI THERVUGAL

FORM II

CLINICAL ASSESSMENT

1. Serial No: _____

2. Name: _____

3. Date of birth | | | | | | | | |

D D M M Y E A R

4. Age: _____ years

5. Date: _____

GENERAL EXAMINATION:

1. Height: _____ cms. BMI _____ (Weight Kg/ Height m2)

2. Weight (kg):

3. Temperature (°F):

4. Pulse rate:

5. Heart rate:

6. Respiratory rate:

7. Blood pressure:

8. Pallor:

9. Jaundice:

10. Cyanosis:

11. Lymphadenopathy:

12. Pedal edema:

13. Clubbing:

14. Jugular vein pulsation:

VITAL ORGANS EXAMINATION

	Normal	Affected
1. Stomach	☐	☐
2. Liver	☐	☐
3. Spleen	☐	☐
4. Lungs	☐	☐
5. Heart	☐	☐
6. Kidney	☐	☐
7. Brain	☐	☐

SYSTEMIC EXAMINATION:

1.Respiratory system _____

2. Cardio vascular system _____

3. Gastrointestinal System _____

4. Central Nervous System _____

5. Uro genital System _____

6. Endocrine System _____

SIDDHA SYSTEM OF EXAMINATION

[1] ENNVAGAI THERVU [EIGHT-FOLD EXAMINATION]

I. NAADI (KAI KURI) (RADIAL PULSE READING)

(a) **Naadi Nithanam (Pulse Appraisal)**

1. Kaalam (Pulse reading season)

1. Kaarkaalam ☐ (Rainy season)
2.Koothirkaalam ☐ (Autumn)
3. Munpanikaalam ☐ (Early winter)
4.Pinpanikaalam ☐ (Late winter)
5. Ilavenirkaalam ☐ (Early summer)
6.Muthuvenirkaalam ☐ (Late summer)

2. Desam (Climate of the patient's habitat)

1. Kulir ☐ (Temperate)
2. Veppam ☐ (Hot)

3. Vayathu (Age) 1- 33yrs ☐ 34- 66yrs ☐ 67-100yrs ☐

4. Udal Vanmai (General body condition)

1. Iyyalbu ☐ 2. Valivu ☐ 3.Melivu ☐

5. Naadiyin Vanmai (Expansile Nature)

1.Valivu ☐ 2.Melivu ☐

6. Panbu (Habit)

1. Thannadai ☐ (Playing in) 2. Munnokku ☐ (Advancing) 3.Pinnokku ☐ (Flinching)

4. Pakkamnokku ☐ (Swerving) 5.Puranadai ☐ (Playing out) 6.Illaitthal ☐ (Feeble)

7. Kathithal ☐ (Swelling) 8.Kuthithal ☐ (Jumping) 9. Thullal ☐ (Frsiking)

10. Azhutthal ☐ (Ducking) 11. Padutthal ☐ (Lying) 12. Kalatthal ☐ (Blending)

13. Suzhalal ☐ (Revolving)

(b) Naadi nadai (Pulse Play)

1. Vali ☐ 2. Azhal ☐ 3. Iyyam ☐

4. Vali Azhal ☐ 5. Azhal Vali ☐ 6. Iyya Vali ☐

7. Vali Iyyam ☐ 8. Azhal Iyyam ☐ 9. Iyya Azhal ☐

II.NAA (TONGUE)

1. Maa Padinthiruthal (Coatedness) 1. Present ☐ 2. Absent ☐ 3. Normal ☐

Niram _____

Vadivam _____

Idam _____

Present

2. Niram (Colour) 1.Karuppu (Dark) ☐ 2. Manjal (Yellow) ☐ 3. Velluppu (Pale) ☐

4. Bloody red ☐ 5. Sivappu ☐ 6. Ilanjivappu ☐

3. Suvai (Taste sensation) 1.Pulippu (Sour) ☐ 2. Kaippu (Bitter) ☐ 3. Inippu (sweet) ☐

4. Vedippu (Fissure) 1. Present ☐ 2. Absent ☐

5. Vai neer ooral 1.Normal ☐ 2. Increased ☐ 3.Reduced ☐

(Salivation)

Colour _____

Consistency _____

6. Thickening 1. Present ☐ 2. Absent ☐

7. Tooth impressions 1. Present ☐ 2. Absent ☐

III.NIRAM (COLOUR)

1. Karuppu ☐ 2.Manjal ☐ 3.Velluppu ☐

(Dark) (Yellowish) (Fair)

4. Maaniram ☐ 5. Saambal ☐

(Grey)

6. Colour Change in other external organ_____

IV. MOZHI (VOICE)

1. Sama oli ☐ 2 Urattha oli ☐ 3.Thazhantha oli ☐

(Medium pitched) (High pitched) (Low pitched)

4. Sound produced in lung field during rest ☐

5. Husky voice ☐

V. VIZHI (EYES)

1. Niram (Venvizhi)

(Discolouration)

1. Karuppu ☐ 2. Pazhuppu ☐

3. Sivappu ☐ 4.Manjal ☐

5. Local redness ☐ 6. Total redness ☐

7. Any other Eye disease ☐

2. Neerthuvam 1.Normal ☐ 2. Increased ☐ 3.Reduced ☐

(Moisture)

3. Erichchal 1.Present ☐ 2. Absent ☐

(Burning sensation)

4. Peelai seruthal 1.Present ☐ 2. Absent ☐

(Mucus excrements)

5. Any other eye diseases 1.Present ☐ 2. Absent ☐

VI. SPARISM (PHYSICAL SIGNS)

1. Veppam 1. Mitham ☐ 2. Migu ☐ 3. Thatpam ☐

(Warmth) (Mild) (Moderate) (Low)

2. Chillness 1. Present ☐ 2. Absent ☐

3. Numbness 1. Present ☐ 2. Absent ☐

4. Sticky 1. Present ☐ 2. Absent ☐

5. Thickened hair 1. Present ☐ 2. Absent ☐

6. Cracks 1. Present ☐ 2. Absent ☐

7. Scaling 1. Present ☐ 2. Absent ☐

8. Thickened 1. Present ☐ 2. Absent ☐

9. Ulcer 1. Present ☐ 2. Absent ☐

10. Goose flush 1. Present ☐ 2. Absent ☐

11. Viyarvai (Sweat) 1. Increased ☐ 2. Normal ☐ 3. Reduced ☐

12. Thodu vali (Tenderness) 1. Present ☐ 2. Absent ☐

VII. MALAM (STOOLS)

1. Alavu (Quantity) Normal ☐ Increased ☐ Decreased ☐

2. Niram (Color) 1. Karuppu (Dark) ☐ 2. Manjal (Yellowish) ☐ 3. Paluppu Manjal (Yellow in Brown) ☐ 4. Sivappu (Reddish) ☐ 5. Velluppu (Pale) ☐

3. Sikkal (Constipation) 1. Present ☐ 2. Absent ☐

4. Sirutthal (Poorly formed stools) 1. Present ☐ 2. Absent ☐

5. Kalichchal (Loose watery stools) 1. Present ☐ 2. Absent ☐

6. Seetham 1. Present ☐ 2. Absent ☐

(Watery and mucoid excrements)

7. Vemmai 1. Present ☐ 2. Absent ☐

(Warmth)

8. History of habitual constipation 1. Present ☐ 2. Absent ☐

9. Passing of a) Mucous 1. Yes ☐ 2. No ☐

b) Blood 1. Yes ☐ 2. No ☐

c) Mucous with Blood 1. Yes ☐ 2. No ☐

d) Presence of any food Particles 1. Yes ☐ 2. No ☐

VIII. MOOTHIRAM (URINE)

(a) NEER KURI (PHYSICAL CHARACTERISTICS)

1. Niram (colour)

Colourless	☐	Milky purulent	☐	orange	☐
Red	☐	Greenish	☐	dark brown	☐
Bright red	☐	Black	☐	Brown red or yellow	☐

2. Manam (odour) Yes No

Ammonical : ☐ ☐

Fruity : ☐ ☐

Others : _____

3. Edai (Specific gravity) Yes No

Normal (1.010-1.025) : ☐ ☐

High Specific gravity (>1.025) : ☐ ☐

Low Specific gravity (<1.010) : ☐ ☐

Low and fixed Specific gravity (1.010-1.012): ☐ ☐

4. Alavu (volume) Yes No

Normal (1.2-1.5 lt/day) : ☐ ☐

Polyuria (>2lt/day) : ☐ ☐

Oliguria (<500ml/day) : ☐ ☐

5. Nurai (froth) Yes No

Clear : ☐ ☐

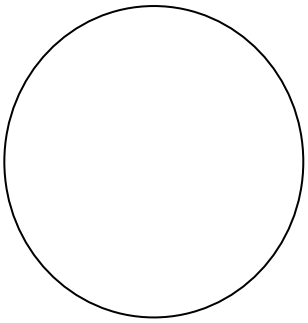
Cloudy : ☐ ☐

Colour of froth : _____

6. **Enjal (deposits)** : Yes No

☐ ☐

(b) NEI KURI (oil spreading sign)



1. Aravam ☐ (Serpentine fashion)

2. Mothiram ☐ (Ring)

3. Muthu ☐ (Pearl beaded appear)

4. Aravil Mothiram ☐ (Serpentine in ring fashion)

5. Aravil Muthu ☐ (Serpentine and Pearl patterns)

6. Mothirathil Muthu ☐ (Ring in pearl fashion)

7. Mothirathil Aravam ☐ (Ring in Serpentine fashion)

8. Muthil Aravam ☐ (Pearl in Serpentine fashion)

9. Muthil Mothiram ☐ (Pearl in ring fashion)

10. Asathiyam ☐ (Incurable)

11. Mellena paraval ☐ (Slow spreading)

12.Others:_____

[2]. MANIKADAI NOOL (Wrist circummetric sign) :

Rt. Wrist _____ Lt. Wrist _____

[3]. **IYMPORIGAL /IYMPULANGAL**

(Penta sensors and its modalities)

	1. Normal	**2. Affected**
1. Mei (skin)	☐	☐
2. Vaai (Mouth/ Tongue)	☐	☐
3. Kan (Eyes)	☐	☐
4. Mookku (Nose)	☐	☐
5. Sevi (Ears)	☐	☐

[4]. KANMENTHIRIYANGAL /KANMAVIDAYANGAL

(Motor machinery and its execution)

	1. Normal	2. Affected
1. Kai (Hands)	☐	☐
2. Kaal (Legs)	☐	☐
3. Vaai (Mouth)	☐	☐
4. Eruvai (Analepy)	☐	☐
5. Karuvaai (Birth canal)	☐	☐

[5]. YAKKAI (SOMATIC TYPES)

Vatha constitution	Pitha constitution	Kaba constitution
Lean and lanky built ☐	Thin covering of bones and joints ☐	Plumpy joints and limbs ☐
Hefty proximities of limbs ☐	by soft tissue	Broad forehead and chest ☐
Cracking sound of joints on walking ☐	Always found with warmth, sweating and offensive body odour ☐	Sparkling eyes with clear sight ☐
Dark and thicker eye lashes ☐	Wrinkles in the skin ☐	Lolling walk ☐
Dark and light admixed complexion ☐	Red and yellow admixed complexion ☐	Immense strength despite poor eating ☐
Split hair ☐	Easily suffusing eyes due to heat and alcohol ☐	High tolerance to hunger, thirst and fear ☐
Clear words ☐	Sparse hair with greying ☐	Exemplary character with good memory power ☐
Scant appetite for cold food items ☐	Intolerance to hunger, thirst and heat ☐	More liking for sweet taste ☐
Poor strength despite much eating ☐	Inclination towards perfumes like sandal ☐	Husky voice ☐
Loss of libido ☐	Slender eye lashes ☐	
In generosity ☐	Pimples and moles are plenty ☐	
Sleeping with eyes half closed ☐		

RESULTANT SOMATIC TYPE: _____

[6] GUNAM

1. Sathuva Gunam ☐

2. Rajo Gunam ☐

3. Thamo Gunam ☐

[7] KOSHANGAL

1. Annamaya Kosham ☐

(Seven Udal thadukal)

2. Pranamaya Kosham ☐

(Pranan + Kanmenthereya)

3.Manomaya Kosham ☐

(Manam + Gnanendhireya)

4. Vingannamaya Kosham ☐

(Budhi + Gnanendhireya)

5. Anandamaya Kosham ☐

(Pranan + Suluthi)

[8] UYIR THATHUKKAL

A. VALI

	1. Normal	2. Affected
1. Praanan (Heart centre)	☐	☐
2. Abaanan (Matedial of muladhar centre)	☐	☐
3. Samaanan (Navel centre)	☐	☐
4. Udhaanan (Forehead centre)	☐	☐
5. Viyaanan (Throat centre)	☐	☐
6. Naahan (Higher intellectual function)	☐	☐
7. Koorman (Air of yawning)	☐	☐
8. Kirukaran (Air of salivation)	☐	☐
9. Devathathan (Air of laziness)	☐	☐
10. Dhananjeyan (Air that acts on death)	☐	☐

B. AZHAL

	1. Normal	2. Affected
1. Anala pittham (Gastric juice)	☐	☐
2. Prasaka pittham (Bile)	☐	☐
3. Ranjaka pittham (Haemoglobin)	☐	☐
4. Aalosaka pittham (Aqueous Humour)	☐	☐
5. Saathaka pittham (Life energy)	☐	☐

C. IYYAM

	1. Normal	2. Affected
1. Avalambagam (Serum)	☐	☐
2. Kilethagam (saliva)	☐	☐
3. Pothagam (lymph)	☐	☐
4. Tharpagam (cerebrospinal fluid)	☐	☐
5. Santhigam (Synovial fluid)	☐	☐

[9] UDAL THATHUKKAL

A. SAARAM

INCREASED SAARAM (CHYLE)	DECREASED SAARAM(CHYLE)
Loss of appetite ☐	Loss weight ☐
Excessive salivation ☐	Tiredness ☐
Loss of perseverance ☐	Dryness of the skin ☐
Excessive heaviness ☐	Diminished activity of the sense organs ☐
White musculature ☐	
Cough, dysponea, excessive sleep ☐	
Weakness in all joints of the body ☐	

SAARAM: NORMAL ☐ INCREASED ☐ DECREASED ☐

B. SENNEER

INCREASED CENNEER(BLOOD)	DECREASED CENNEER(BLOOD)
Boils in different parts of the body ☐	Anemia ☐
Anorexia ☐	Tiredness ☐
Mental disorder ☐	Neuritis ☐
Spleenomegaly ☐	Lassitude ☐
Colic pain ☐	Pallor of the body ☐
Increased pressure ☐	
Reddish eye ☐	
Redness of skin ☐	
Jaundice ☐	
Haematuria ☐	

CENNEER: NORMAL ☐ INCREASED ☐ DECREASED ☐

C. OON

INCREASED OON (MUSLE)	DECREASED OON (MUSLE)
Cervical lymphadenitis ☐	Impairment of sense organs ☐
Vernical ulcer ☐	Joint pain ☐
Tumour in face ,abdomen, thigh, genitalia ☐	Jaw, thigh and genitalia gets shortened ☐
Hyper muscular in the cervical region ☐	
Inflammatory changes in skin ☐	

OON: NORMAL ☐ INCREASED ☐ DECREASED ☐

D. KOZHUPPU

INCREASED KOZHUPPU (ADIPOSE TISSUE)		DECREASED KOZHUPPU (ADIPOSE TISSUE)	
Cervical lymph adenitis	☐	Pain in the hip region	☐
Vernical ulcer	☐	Disease of the spleen	☐
Tumour in face, abdomen, thigh, genitalia	☐		
Hyper muscular in the cervical region	☐		
Dyspnoea	☐		
Loss of activity	☐		

KOZHUPPU: NORMAL ☐ INCREASED ☐ DECREASED ☐

E. ENBU

INCREASED ENBU (BONE)	DECREASED ENBU (BONE)
Growth in bones and teeth ☐	Bones diseases ☐
Excessive hair growth ☐	Loosening of teeth ☐
	Nails splitting ☐
	Falling of hair ☐

ENBU: NORMAL ☐ INCREASED ☐ DECREASED ☐

F. MOOLAI

INCREASED MOOLAI (BONE MARROW)	DECREASED MOOLAI (BONE MARROW)
Heaviness of the body ☐	Osteoporosis ☐
Swollen eyes ☐	Sunken eyes ☐
Swollen phalanges chubby fingers ☐	
Oliguria ☐	
Non healing ulcer ☐	

MOOLAI: NORMAL ☐ INCREASED ☐ DECREASED ☐

G. SUKKILAM / SURONITHAM

INCREASED SUKKILAM/SURONITHAM (SPERM OR OVUM)	DECREASED SUKKILAM/SURONITHAM (SPERM OR OVUM)
Infatuation and lust towards women / men ☐	Failure in reproduction ☐
Urinary calculi ☐	Pain in the genitalia ☐

SUKKILAM/NORMAL SURONITHAM ☐ INCREASED ☐ DECREASE ☐

10] MUKKUTRA MIGU GUNAM

I. Vali Migu Gunam	**1. Present**	**2. Absent**
1. Emaciation	☐	☐
2. Niram – blackish	☐	☐
3. Desire to take hot food	☐	☐
4. Shivering of body	☐	☐
5. Abdominal distension	☐	☐
6. Constipation	☐	☐
7. Insomnia	☐	☐

8. Weakness ☐ ☐

9. Defect of sense organs ☐ ☐

10. Giddiness ☐ ☐

11. Lake of interest ☐ ☐

II. Pitham Migu Gunam **1. Present** **2. Absent**

1. Yellowish discolouration of skin ☐ ☐
2. Yellowish discolouration of the eye ☐ ☐
3. Yellow coloured urine ☐ ☐
4. Yellowishness of faeces ☐ ☐
5. Increased appetite ☐ ☐
6. Increased thirst ☐ ☐
7. Burning sensation over the body ☐ ☐
8. Sleep disturbance ☐ ☐

III. Kapham Migu Gunam **1. Present** **2. Absent**

1. Increased salivary secretion ☐ ☐

2. Reduced activeness ☐ ☐

3. Heaviness of the body ☐ ☐

4. Body colour – fair complexion ☐ ☐

5. Chillness of the body ☐ ☐

6. Reduced appetitie ☐ . ☐

7. Eraippu ☐ ☐

8. Increased sleep ☐ ☐

[11]**. NOIUTRA KAALAM**

1. Kaarkaalam ☐ (Aug15-Oct14)

2.Koothirkaalam ☐ (Oct15-Dec14)

3. Munpanikaalam ☐ (Dec15-Feb14)

4.Pinpanikaalam ☐ (Feb15-Apr14)

5. Ilavanirkaalam ☐ (Apr15-June14)

6.Muthuvenirkaalam ☐ (June15-Aug14)

[12]**. NOI UTRA NILAM**

1. Kurunji ☐ (Hilly terrain)

2. Mullai ☐ (Forest range)

3. Marutham ☐ (Plains)

4. Neithal ☐ (Coastal belt)

5. Paalai ☐ (Desert)

GOVT SIDDHA MEDICAL COLLEGE, PALAYAMKOTTAI.

DEPARTMENT OF NOI NAADAL

A STUDY ON DIAGNOSTIC METHODOLOGY OF

"MANTHARA KASAM"

IN THE CONTEXT OF ENNVAGAI THERVUGAL

FORM-III

LABORATORY INVESTIGATIONS

1. O.P No: _____ Lab. No_____ Serial No_____

2. Name: _____

3. Date of birth: ☐☐ ☐☐ ☐☐☐☐

D D M M Y E A R

4. Age: _____ years

5. Date of assessment: _____

Urine Examination

6. Sugar _____

7. Albumin _____

8. Deposits _____

Blood

9. TC _____ Cells/cu mm

10. DC

P___% L _____% E _____% M _____% B_____%

11.Hb _____ gms%

12. ESR At 30 minutes _____ mm at 60 minutes _____mm

13. Blood Sugar-(F) _____mgs%

(PP) _____mgs%

14. Serum Cholesterol _____mgs %

15. Motion Test : Ova

Cyst

Occult blood

16. X-ray

17. Pulmonary function test

Date: Signature of the Doctor

GOVT SIDDHA HOSPITAL –PALAYAMKOTTAI

DEPARTMENT OF NOI NAADAL

A STUDY ON DIAGNOSTIC METHODOLOGY OF

“MANTHARA KASAM”

IN THE CONTEXT OF ENNVAGAI THERVUGAL

Register No:32103010 (2010-2013),

FORM IV A

INFORMED WRITTEN CONSENT FORM

I ……..exercising my free power of choice, hereby give my consent to be included as a subject in the diagnostic trial entitled A study on **“MANTHARA KASAM”.** I will be required to undergo all routine examinations. I may be asked to give urine and blood samples during the study.

I have been informed about the study to my satisfaction by the attending investigator and the purpose of this trial and the nature of study and the laboratory investigations. I also give my consent to publish my urine sample photographs in scientific conferences and reputed scientific journals for the betterment of clinical research.

I am also aware of my right to opt out of the trial at any time during the course of the trial without having to give the reasons for doing so.

Signature /thumb impression of the patient:

Date :

Name of the patient:

Signature of the investigator :

Date :

Head of the Department :

Date :

அரசு சித்த மருத்துவ கல்லூரி பாளையங்கோட்டை

பட்ட மேற்படிப்பு நோய்நாடல் துறை

"மந்தார காசம்" - நோய் கணிப்பு முறை

பற்றிய ஓர் ஆய்வு

பதிவு எண்: 32103010 (2010 - 2013)

ஒப்புதல் படிவம்

ஆய்வாளரால் சான்றளிக்கப்பட்டது

நான் இந்த ஆய்வை குறித்த அனைத்து விபரங்களையும் நோயாளிக்கு புரியும் வகையில் எடுத்துரைத்தேன் என உறுதியளிக்கிறேன்.

தேதி: **கையொப்பம்:**

இடம்: **பெயர்:**

நோயாளியின் ஒப்புதல்

நான் ---------- என்னுடைய சுதந்திரமாக தேர்வு செய்யும் உரிமையைக் கொண்டு இங்கு தலைப்பிடப்பட் **"மந்தார காசம்"** நோயை கணிப்பதற்கான மருத்துவ ஆய்விற்கு என்னை உட்படுத்த ஒப்புதல் அளிக்கிறேன்.

என்னிடம் இந்த மருத்துவ ஆய்வின் காரணத்தையும், மருத்துவ ஆய்வுக்கூட பரிசோதனைகள் பற்றி திருப்தி அளிக்கும் வகையில் ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.

நான் இந்த மருத்துவ ஆய்வின் போது காரணம் எதுவும் கூறாமல், எப்பொழுது வேண்டுமானாலும் இந்த ஆய்விலிருந்து என்னை விடுவித்து கொள்ளும் உரிமையை தெரிந்திருக்கின்றேன்.

தேதி: **கையொப்பம்:**

இடம்: **பெயர்:**

சாட்சிக்காரர் கையொப்பம்:

பெயர் :

உறவுமுறை :

அரசு சித்த மருத்துவ கல்லூரி பாளையங்கோட்டை

பட்ட மேற்படிப்பு நோய்நாடல் துறை

"மந்தார காசம" - நோய் கணிப்பு முறை

பற்றிய ஓர் ஆய்வு

நோயாளியின் தகவல் படிவம்

ஆய்வின் நோக்கமும் பயனும்:

தாங்கள் பங்கெடுத்துக் கொள்ளும் இவ்வாய்வு சித்த மருத்துவ முறையில் நோயை கணிப்பதற்கான ஓர் ஆய்வுமுறை. இவ்வாய்வு தங்களின் நோய்கணிப்பை பற்றியும் நாளுக்கு நாள் இருக்கும் நோயின் தன்மை பற்றியும் அறிய உதவும்.

ஆய்வுமுறை:

தாங்கள் நேர்காணல் மற்றும் பரிசோதனைகளின் மூலம் உள்நோயாளி, வெளிநோயாளி பிரிவில் ஆய்வு செய்யப்படுவீர்கள். முதல் நேர்காணலின்போது ஆய்வாளரால் உடல் பரிசோதனை, நாடி, நீர், மலம, மற்றும் இரத்த பரிசோதனை செய்து குறிப்பிட்ட குறிகுணங்கள் இருப்பின் இவ்வாய்விற்காக எடுத்துக்கொள்ளப்படுவீர்கள்.

நேரும் உபாதைகள்:

இவ்வாயில் இரத்த பரிசோதனைக்காக இரத்தம் எடுக்கும்போது சிறிது வலி ஏற்படலாம்.

நம்பகத்தன்மை:

தங்களின் மருத்துவ ஆவணங்கள் அனைத்தும் மருத்துவர் ஆய்வாளர் அல்லாத பிறரிடம் தெரிவிக்கப்படமாட்டாது.

நோயாளியின் பங்களிப்பும் உரிமைகளும்:

இவ்வாய்வில் தங்களின் பங்களிப்பு தன்னிச்சையானது. இவ்வாய்வில் தாங்கள் ஒத்துழைக்க இயலவில்லையெனில் எப்பொழுது வேண்டுமானாலும் காரணம் எதுவும் கூறாமல் விலகிக்கொள்ளலாம். இவ்வாய்வின்போது அறியப்படும் தகவல்கள் தங்களுக்கு தெரிவிக்கப்படும். நோயாளியின் ஒப்பதலுக்கிணங்க நோய்கணிப்பு விவரங்களை ஆய்வாளர் பயன்படுத்திக்கொள்வார். நோயாளி ஆய்வினிடையே ஒத்துழைக்க மறுத்தாலும், எந்த நிலையிலும் நோயாளியை கவனிக்கும் விதம் பாதிக்கப்பட மாட்டது. நிறுவன நெறிமுறை குழுமம் மேற்கண்ட ஆய்வினை மேற்கொள்ள ஒப்புதல் அளித்துள்ளது. ஆய்வு குறித்த சந்தேகங்கள் இருப்பின் கீழ்கண்ட நபரை தொடர்பு கொள்ளவும்.

பட்டமேற்படிப்பாளர்: மரு. ஞா.சுனில் குமார்

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